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ORIGINAL ARTICLES.

THE NATURE AND PURPOSE OF THE *BRITISH PHARMACOPŒIA.*[1]

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In the course of the practical demonstrations which we commence to-day, you will find that frequent reference will be made to the *British Pharmacopœia* as a volume to the commands of which it is our duty to pay strict attention. And at a still more advanced period of your studies, and even when you enter on the larger field of practice, the same somewhat mysterious authority will, at least in certain of your relationships, assert itself. It is therefore well for you at the outset to understand what exactly the *Pharmacopœia* is, and how in certain departments of medical work it comes to have supreme authority and command.

As the word *Pharmacopœia* suggests to you, it is a book which deals with the preparation and composition of medicines, and its authority arises from the fact that it is issued by the General Medical Council in compliance with directions given to the Council in certain Acts of Parliament. Here, upon the cover of the book, is the advertisement of its legal and official character in the form of the royal arms, and the phrase "By Authority." At first sight it seems rather curious that the legislature should concern itself to secure the production of a book dealing with the composition of medicines. There is, however, a very good reason for such action on the part of the legislature, and that reason is the safety and welfare of the public. As you know, members of the public not infrequently purchase medicines for themselves, and it is part of the daily habit of the country for patients to receive from physicians written directions for medicines in the form of prescriptions, and to get these medicines prepared or dispensed by presenting the prescription to a pharmacist or dispenser. Now manifestly it is for the public safety and welfare that, in all these transactions, the same name shall always mean one and the same substance, of one and the same standard of strength. If every druggist or pharmacist may make (say) tincture of opium of any strength he individually thinks proper, the name "tincture of opium" may mean different things in different shops, and a dose which from one source may be beneficial, from a second may be useless, and from a third fatal. In exactly the same way, in the absence of authority, the exact composition and strength of a medicine dispensed from a physician's prescription might vary according to the pharmacist who dispensed it. Neither the physician who wrote the prescription, nor the patient who received it, could be sure that the pharmacist who dispensed it would understand its terms in the sense in which the physician employed them. Such confusion and uncertainty would be most prejudicial to the public interest. It therefore becomes necessary to remove all chance of such confusion by providing some authoritative voice to define the exact meaning to be attached to the names of medicines, so that the same name shall in every part of the kingdom and to every person mean one and the same substance. The one authoritative voice to which all must listen is the law of the land. Hence it is under the sanction and authority of the law that the *Pharmacopœia* is issued as a "uniform standard and guide whereby the nature and composition of substances used in medicine may be ascertained and determined." The position, in short, is this. It is in the public interest that medicines which bear the same name shall be of the same composition and strength. Such uniformity can be secured only by providing an official and imperative definition which everyone must accept, and to which everyone must conform. Hence the existence of the *Pharmacopœia*, and the compulsory force given to its directions by legal enactment.

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[1] A lecture delivered in Queen Margaret College as an introduction to the course of Practical Pharmacy, Summer Session, 1897.

We find, then, in the *Pharmacopœia* the names of those medicines which, in the judgment of the General Medical Council, require authoritative recognition in the public interest. And each name is provided with an exact definition, so that there can be no mistake as to its meaning. Take for example this medicine—viz., poppy capsules. It is named in the official list, and its official definition is, "the nearly ripe dried capsules of Papaver somniferum." This is the sense in which the *Pharmacopœia* uses the term "poppy capsules," and hence, when that term appears in a physician's prescription, every pharmacist in the kingdom is compelled to apply to it one and the same meaning—viz., that expressed in the *Pharmacopœia.*

But it is necessary for the *Pharmacopœia* to go further. It may not be possible for every dispenser to cultivate for himself the poppy capsules he requires, and it certainly is not possible for him to obtain at first hand many of the official remedies, as these come from all parts of the world. Therefore, he must depend largely for his supplies upon British and foreign merchants. Now, if the *Pharmacopœia* only provides names and definitions of medicines, the pharmacist may be deceived in some of his purchases. Some substance may be sold to him under the pharmacopœial name, and yet not be what it professes to be. He may in all innocence use this in the preparation of medicines, which will then not be of the nature and quality desired by the physician and patient. The medicines will masquerade in the official dress without corresponding to the official definition. Thus the purpose of the *Pharmacopœia* to secure uniformity in the practical interpretation of the names of medicines will be defeated. Against this result the *Pharmcopœia* provides by appending to the name and definition of each remedy a description of its physical characters. The pharmacist can therefore compare the medicines he dispenses with the official descriptions. Thus he is placed in a position to detect any attempted act of substitution or adulteration, and to have a personal knowledge that each substance which he uses under an official name is actually the substance named, defined, and described in the *Pharmacopœia.* This position is incumbent on the pharmacist. If he supplies under an official name a substance not corresponding to the official definition, it is no excuse for him to plead that he purchased it as genuine. It is his duty to compare the medicines he deals in with the official descriptions, and only to use those which, by their correspondence with these descriptions, he can personally guarantee to be genuine.

But it is obvious that a mere description of physical characters will not in all cases be sufficient to enable the pharmacist to determine the genuineness and purity of his medicines. For example, two substances may have physical characters practically identical. Thus the crystalline form of zinc sulphate is the same as that of magnesium sulphate, and the iodide of potassium is not by its physical appearances easily distinguished from the bromide. In these and other cases, therefore, an official description limited to the physical characters of the substances would not put the pharmacist in a position to guarantee the genuineness and purity of the medicines he supplies. Similarly in the case of such a substance as distilled water, a mere contemplation of its physical characters will not lead to the detection of impurities, such as lead, carbonic acid gas, or mineral salts, even though these should be present in considerable amounts. Hence, in these and numerous other cases, the *Pharmacopœia* not only provides a description of the physical characters of the medicines, but, in addition, enumerates chemical tests, by the application of which to any particular specimen the genuineness or otherwise of this may be determined. It is not, however, merely for medicines of inorganic origin that chemical tests are necessary. Thus there are numerous medicines of organic origin which depend for their medicinal value on the presence of definite chemical principles, and these are quite capable of quantitative estimation. Cinchona bark, for example, is, roughly speaking, valuable as a remedy because of the presence in it of quinine, and the medicinal activity of any specimen of the bark will therefore depend upon the amount of quinine the specimen contains. Now, in physical characters, a specimen of cinchona bark poor in quinine, may closely resemble a specimen of bark rich in quinine; and, therefore, unless the *Pharmacopœia* in describing cinchona bark gives the details of a quantitative test by which the percentage of quinine may be estimated, one pharmacist may be supplying and using a bark of considerable medicinal efficacy, whilst another may be using a bark which has little or none. Hence the tinctures, infusions, and other preparations of cinchona, supplied or dispensed by the one man, will have quite a different strength from the similarly named preparations dispensed by the other. In short, the main object of the *Pharmacopœia* will be defeated. The same name will *not* always mean the same medicine of one and the same strength. But when in the *Pharmacopœia* cinchona bark is not only named and defined, and its physical characters described, but in addition, an official standard of its value in quinine is stated, and a test is provided by which it can be determined whether a specimen of the bark does or does not come up to that standard, it is manifest that the official meaning of cinchona bark is made very precise and definite. In the official sense, it is not merely the bark of a particular tree, but a bark having a certain definite quinine value. The introduction into the *Pharmacopœia*, therefore, of a quantitative chemical test in connection with the description of cinchona bark, compels every pharmacist to use cinchona bark of one and the same quinine value, and hence the medicinal strength of the tinctures and other preparations of cinchona is the same by whatever pharmacist they are prepared. The same remarks apply to opium and many other remedies. Two pieces of opium, as far as their physical characters are concerned, may display no appreciable difference. Yet one may contain 10 per cent of the active principle, morphine, and another only 5 per cent. If the *Pharmacopœia* only provided a description of the physical characters of opium, the pharmacist might use one or other of these two, and the strength of the (say) tincture of opium which he supplied would vary accordingly. The name tincture of opium would therefore *not* always mean the same substance of one and the same strength. But when, in addition to the name opium, we read in the *Pharmacopœia*, not only a definition of the substance and a description of its physical characters, but also the details of a test which, when applied, will prove opium to contain 10 per cent of morphine, we learn that we are compelled by law to understand by opium not merely the inspissated juice of the unripe capsule of the Papaver somniferum; not merely a substance having certain physical characters; but further, a substance with a definite medicinal value in consequence of the presence of an exact proportion of active principle—viz., 10 per cent of morphine. This is the meaning of opium in the official sense of the term, and it is the meaning by which the physician and the pharmacist alike are bound. This one substance, of the definite strength indicated, is the one substance to be employed in the preparing and dispensing of medicines when the word opium appears in the designation.

The task of the *Pharmacopœia*, however, even with this provision of descriptions and tests, is still incomplete, and for this reason:—The great majority of the substances used as medicines

—*e.g.*, poppy capsules, gentian root, &c.—are obviously, in their natural state, not in a form convenient for administration to patients. Each of them doubtless contains a small proportion of some medicinal principle, but with this is associated a large amount of material useless for the purposes of the physician. Hence, it is the custom to obtain from the crude drugs various preparations such as infusions, tinctures, extracts, &c.; and these contain the medicinal constituents of the drugs apart from useless matter, and in forms convenient for use as medicines. It can only be as a result of observation and experiment that it can be determined what are the preparations which, in the case of each particular drug, most accurately represent its medicinal value. But such knowledge has gradually accumulated by experience, and it is expressed in the *Pharmacopœia* in the shape of the various groups of official preparations. Thus, to return to our original example, if we look in the *Pharmacopœia* at the page in which poppy capsule is named and described, we shall find, after the detailed description of the remedy, a list of its preparations; and in this particular case the list includes a decoction, an extract, and a syrup. And now, if we turn to the part of the volume dealing with (say) decoctions, we shall find detailed directions for making decoction of poppy—the ingredients used, their proportions, the length of time they are to be boiled, and, indeed, all the minutiæ necessary to complete the process of manufacture. To these directions the pharmacist is compelled by law to adhere, so that decoction of poppy is of the same nature and same strength in every part of the kingdom. The same principle applies to all the other official preparations. Therefore, both as regards remedies in their crude state, and as regards also the forms or preparations in which they are used, the authority of the *Pharmacopœia* is provided to secure uniformity in the definition and interpretation of the terms in which medicines are named. The sense in which these terms are to be understood and acted upon in this country is the sense defined in the *British Pharmacopœia*, and none other is recognised or acknowledged. And the justification of this legal definition is, that without it, medicinal preparations bearing the same name might have different strengths, and thus the public safety and welfare would be imperilled.

The main function of the *Pharmacopœia*, then, is to secure an authoritative definition of the substances used as remedies, and authoritative strengths and methods of making the various medicinal preparations. If it is to fulfil this function, it is manifest that the *Pharmacopœia* must name and define all the substances generally employed as remedies. Otherwise the remedies omitted will have no official descriptions or tests, and the dispenser meeting with the name of any of these remedies in a prescription will have no infallible guide to the interpretation of this name. Consequently there will be room for variety in the interpretation adopted. No doubt the rule here stated must be applied within the limits of practical commonsense. It cannot be expected that every odd substance which some small number of medical men persist in regarding as a remedy shall be introduced into the pages of the national *Pharmacopœia*. But it is for the public interest—for which the *Pharmacopœia* exists—that an official description and official tests shall be supplied for every medicine which is ordered at all frequently, or by any reasonable number of medical men.

The question to be considered then in connection with the discussion whether any particular substance shall or shall not be introduced into the *Pharmacopœia* is—Is it used to such an extent as to make it advisable in the public interest to provide an official definition and description? The question, I say, is not, Is it *useful?* but, Is it *used?* The answer to the former question is, no doubt, to medical practitioners all important. But it is not the business of the General Medical Council to supply that answer, nor indeed has the Council any special competence to do so. It is no doubt desirable that medical men shall employ as remedies only those substances which possess undoubted therapeutic efficacy. The *Pharmacopœia*, however, does not exist for the purpose of attaining this end. It has to take professional practice as it exists, and by providing adequate definitions and tests for remedies actually in use, to do what is possible to secure that the dispenser shall supply the substances actually intended by the physician. Hence the fact that any substance is named in the *Pharmacopœia* is not an official guarantee that it possesses medicinal virtues. It merely proves that, in the opinion of the General Medical Council, the substance in question has an area of employment so considerable, that an official definition of it is demanded. Of course, if any substance is at all extensively used, there is a certain presumption that it is useful. But of its utility the *Pharmacopœia* gives no official warrant. It is, in short, the function of the *Pharmacopœia* to define remedies, not to select them. The education of the profession in the selection and use of remedial agents is not the business of the General Medical Council, which—at least in its corporate capacity—has no special qualifications for such a task. That education must be supplied by those engaged in the special study of therapeutics, and by the published experience of members of the profession as this appears in the medical literature of the present and former times. From these sources, and from his own experience, every practitioner must form for himself an opinion as to what substances have value as remedies, and in the selection and use of these he must act on his own responsibility. It may be urged that the Medical Council might call to its assistance various therapeutic experts, and might on the advice of these pronounce on the medicinal virtues of substances proposed to be entered in the *Pharmacopœia.* A volume so constructed would doubtless have considerable educational value, but there is no need to set the machinery of the Medical Council in action in order to secure its appearance. This is a free country, where every man "may speak the thing he will," and if any therapeutic expert has aught to say that is worth saying, the medical journals and publishers' lists are open to him. His opinion and teaching will then be taken on their merits, which will be better both for him and for the profession, than if his personality were concealed behind the dignity and form of the General Medical Council. There is, indeed, no necessity for the existence of any volume having legal force to indicate to us what are remedies and what are not. We do not require such official instruction, nor is it advisable to ask for it. To stamp a selected list of substances as authoritative medicinal agents, would be more likely to hinder than to promote progress in the healing art. It would tend to stereotype practice and to erect an artificial therapeutic orthodoxy, The profession and the public no more need official teaching on therapeutics, than they need an official chemistry, or anatomy, or surgery. All these can be supplied, and are best supplied, by private enterprise. But the public and the profession do require an authoritative interpretation of the names of medicinal agents, otherwise every man may understand these as seemeth right in his own eyes. Hence the legislature has ordered a list of such agents to be compiled, and has committed the responsibility of the compilation to the General Medical Council. This list, with the necessary descriptions and tests, is the *British Pharmacopœia.*

There is, however, one feature of the *Pharmacopœia* which at first sight gives colour to the suggestion that one of the purposes of the volume is at least to suggest instruction in therapeutics. This is the statement of a dose in connection with each of the official remedies employed for internal administration. But in the preface to the volume it is carefully pointed out that "these doses are not authoritatively enjoined by the Council, and the practitioner must rely on his own judgment and act on his own responsibility in graduating the doses of any therapeutic agents which he may wish to administer to his patients." A statement of doses in the *Pharmacopœia* has this practical value. A physician in writing a prescription may—for even Jupiter sometimes nods—by a lapse of memory or a slip of the pen, order a dose much in excess of what he intends. The dispenser, in consequence of the statement of doses in the *Pharmacopœia*, is now in a position to note this excessive dose, and to approach the physician to ask for his direct authority before dispensing it, on the ground that it exceeds the maximum quoted in the *Pharmacopœia*. This would be a somewhat difficult thing for the dispenser to do, were he not able to support himself with a definite official reference. The introduction of doses into the *Pharmacopœia* provides, therefore, an additional check upon accidental errors, and in this way promotes the public safety. It is not the case that in mentioning what is an "average dose" of each remedy, the *Pharmacopœia* intends to instruct practitioners in the treatment of their patients. The selection of the dose, like the selection of the remedy, is a matter for medical education and experience, and is taken entirely on the personal responsibility of the physician. Frequently, in practice, the pharmacopœial dose is purposely exceeded, and when this is the case it is well for the physician to indicate that his order in this respect is intentional by writing some special mark, such as a note of exclamation, or his initials, immediately after the dose in question. In this way the dispenser will be made aware that the large dose is the result of design and not of accident, and so will have no hesitation in dispensing the prescription.

One further point demands attention. The *Pharmacopœia*, as we have seen, is not a book intended to give instruction or guidance in therapeutics. Neither is it intended as a student's text-book in chemistry, or botany, or pharmacy, or materia medica. It is a book of technical descriptions and technical directions intended to guide the pharmacist in the selection and manipulation of remedies and medicinal preparations more or less frequently used and ordered by physicians. The student can be provided by private authors with text-books on the geography, chemistry, pharmacy, &c., of the official remedies much more satisfactorily than by the Medical Council, which has no commission or responsibility to supply such instruction. The *Pharmacopœia* therefore abounds in technical terms and phrases without providing any explanations of these for the benefit of the uninstructed. It tells you, for example, that distilled water should give no precipitate with barium chloride, but it does not tell you that this test is to show the absence of sulphates, because the purpose of the *Pharmacopœia* is not to teach you chemistry, but, by setting forth the methods necessary to test the genuineness and purity of distilled water, to put the pharmacist in a position to supply and use a pure article in the preparation and dispensing of medicines as ordered by the physician. The same is true of all the other official descriptions and tests. If you want to understand the *Pharmacopœia*, therefore, you must first of all be competent to appreciate the significance of the language of chemistry and botany and physics, and you must study the published commentaries on the volume, just as if you want to understand the effect of an Act of Parliament you must be competent to interpret the exact meaning of the technical terms which abound in legal phraseology. It is no more the business of the *Pharmacopœia* to teach chemistry than it is the business of an Act of Parliament to teach the rules of legal interpretation. The *Pharmacopœia* demands a technical phraseology because only in this way can definiteness and accuracy of statement be secured. Hence the person who approaches its study must by his previous training be fitted for the task, and at many points of his course will find the need of some friendly commentator and guide. To the pharmacist, the thorough and detailed study of the *Pharmacopœia* is an absolute necessity, as all his proceedings are governed by it. To the medical student, the details of the book are of but little importance, and those of mere manufacturing interest he can entirely disregard. But until he has gained experience and is competent to judge for himself, he must remember that the substances named in the *Pharmacopœia* have a more or less considerable body of professional opinion in their favour, and that there is therefore a reasonable probability that at least the majority of them have some medicinal value. Further, he must remember that the official preparations of each remedy are the forms in which experience has shown that remedy to be most suitably and successfully presented, and hence it is his duty to equip his memory with at least the most important of these preparations. In his practice, too, the medical man must needs have dealings with the trained and educated pharmacists who execute his orders, and it is therefore well for the personal position of the physician that he shall be familiar with the nature of the *Pharmacopœia*, with the characters of the official preparations, and with the principles of the processes by which these are obtained. Ignorance on these points limits his range of the agents which may be usefully employed in practice, and is apt when it is betrayed to the pharmacist to lessen the latter's respect both for the individual physician and for the profession generally. It provokes, as it is phrased by an old author, "the sneering of the apothecary's boy." Again, the medical man has also this additional relation to the *Pharmacopœia*. Most of the names of the medicines he is to use, are there defined, and the definition is as rigid for him as for the pharmacist. When he writes in his prescription "tincture of opium" or "arsenical solution," or any other official preparation, he is not at liberty to understand by these terms aught but what the *Pharmacopœia* understands by them, and therefore the strength of the active ingredient in these preparations is a matter of prime importance to the physician.

In this class you are to study by the use of your own senses the characters and properties of some of the more frequently used remedies; to see how these and others can be prepared for actual use; to apply the methods ordered in making the official preparations; and to gain some insight into the art of practical dispensing. Very frequently in your work you will be referred to the pages of the *Pharmacopœia*. I hope you are now prepared to recognise the exact position and force of that authority, and to appreciate and justify its existence.

ON SOME DISEASES OF THE EYE, THE RESULT OF SYPHILIS.[1]

BY A. MAITLAND RAMSAY, M.D., F.F.P. & S. GLASG.,

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THE frequent occurrence of diseases of the eye due to syphilis renders the subject one of great interest and importance. It is well known that, with the exception of the lens, each of the structures of the eyeball and its appendages may be affected, and ocular symptoms may occur either early or late in the course of the disease, and in the inherited as well as in the acquired form. It is not my intention, however, in this contribution to discuss at length the relationship between syphilis and eye diseases, or to do more than mention some of those eye symptoms which are the result of the visceral complications of tertiary syphilis. My purpose is simply to give details of a few cases in which the eye has been specially affected, and to endeavour to group these in such a way as to present a clinical picture of syphilis in so far as it affects the eye.

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[1] A paper read at a meeting of the Glasgow Medico-Chirurgical Society, on 19th March, 1897, and illustrated by lantern slides.

The acquired form of the disease may be first considered. The syphilitic poison may gain entrance to the system through the eye, and the primary sore then forms upon the eyelids or conjunctiva. Since the full and accurate descriptions of Ricord in 1850, the number of reported cases has gone on increasing, till it is now possible to arrive at some general conclusions. The favourite site for a chancre of the eyelid is at the inner canthus, and the lower lid is the one more frequently affected. It is seen in men oftener than in women, and is met with at all ages. In many instances the infection is purely accidental and non-venereal, and the patients have no suspicion of the syphilitic nature of the sore. It is often, therefore, very difficult to trace the source of contagion, and occasionally the ætiology cannot be determined. The most frequent modes of communication, however, are undoubtedly by the finger, the mouth, or the tongue, or through sponges, towels, &c., which have been previously contaminated. From this it will be readily understood how it is that medical men suffer so frequently from this particular form of chancre, so much so, indeed, that in France chancre of the eyelid has been designated the professional chancre.[1] While a doctor is brushing a syphilitic throat he may receive infection from the accidental fall of saliva on his face through the patient's coughing, or after touching a syphilitic sore he may accidentally carry his finger to his eye, and thereby inoculate himself. Infants and young children are often infected by being kissed by a nurse suffering at the time from mucous patches in her mouth. It is common amongst the lower classes to remove foreign bodies from the eye by means of the tongue, and if the operator suffers from mucous patches in the lips it is easy to understand how the patient receives infection. After a bruise upon the eye it is also a common practice to incise the skin and suck out the effused blood, and I have known of palpebral chancre arising from this cause. The application of the "fasting spittal" or of urine, both of which are frequently applied to inflamed eyes by the poor, may also be a source of contamination, and as these remedies are employed when the edges of the eyelid are inflamed and partially denuded of epithelium, the syphilitic poison will gain all the more ready access to the system. It has been affirmed that extra-genital chancres, and more particularly those occurring upon the eyelids, are apt to be followed by specially severe secondary symptoms, but my own experience does not tend to confirm the statement.

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[1] Since this paper was written I was consulted by a dentist on account of transient dilatation of his right pupil with paresis of accommodation. He told me that seven years previously, while extracting a tooth, his face was bespattered with blood and saliva. Some weeks afterwards a sore formed on the right inner canthus, and this was followed by all the usual signs and symptoms of secondary syphilis.

CASE I.—*Chancre of eyelid in a boy 6 years of age—Ætiology obscure—Complete recovery.*

W. T., æt. 6, was admitted to the Eye Infirmary on 26th August, 1896. There was on the left lower eyelid an ulcer, which was said to have commenced as a little pimple upon the palpebral margin. It now involved the middle two-thirds of the lid, the edge of which was partially eaten into, and denuded of eyelashes. It was clearly circumscribed, its edges being hard and somewhat elevated, and it was covered by a greyish crust, the removal of which left a raw surface, which bled freely. There was marked œdema of the ocular conjunctiva, and marginal blepharitis had for several months affected both upper and lower eyelids on the right side. The gland in front of the left ear was distinctly swollen, but it was not tender to touch. The appearance at once suggested chancre of the eyelid, but all the history that could be obtained was that the boy had received a scratch from a girl's finger-nail three weeks before. From what could be learned of the child's home surroundings, however, it is more than likely that he was infected by one of his own relatives, who kissed his eyelid after it had been scratched. Grey powder and quinine, half a grain of each three times a day, were prescribed, and the lid was dusted with iodoform, but in spite of this treatment the ulcer gradually increased in size, and the sub-maxillary, cervical, and supra-clavicular glands became swollen on the left side. Like the pre-auricular gland, these also were hard, freely movable, and painless. About a fortnight after the patient was admitted to the hospital, a papular rash, distinctly coppery in colour, appeared over the chest, and in a few days covered the whole body with the exception of the face. There was no sore throat. The powders were now (18th September) stopped, mercurial inunction was begun, and the ulcer dressed with black-wash. Improvement set in almost immediately, and in three weeks' time the eruption had disappeared, the ulcer had in great part healed, and the glandular swelling had become markedly reduced in size. By the end of October all that remained of the ulcer was a small erosion along the border of the lid. The mercurial inunction was now stopped, and small doses of the biniodide of mercury were prescribed. The boy was allowed to leave the hospital, and when he was last seen (February, 1897) at the dispensary, the glandular swellings were quite gone, and the only trace of the chancre was along the margin of the lid, where there was a slight loss of substance and seemingly permanent disappearance of the eyelashes.

The cartilage of the lid occasionally becomes affected, and a syphilitic tarsitis results.

CASE II.—*Syphilitic tarsitis, followed several years afterwards by iritis of the same eye.*

Some years ago, a man, between 20 and 30 years of age, came to the Eye Infirmary, complaining that for many weeks he had suffered from inflammation of his right upper eyelid, the margin of which was swollen and red, and presented the appearance of a chronic blepharitis marginalis, from which all discharge had been carefully washed away. The usual local remedies were prescribed, but with no good effect, for the lid became more and more swollen. Though it was very red it was not painful, and the patient complained more of the disfigurement produced than of any actual suffering. He admitted that he had been exposed to risk of infection, but he was not aware that he had ever suffered from syphilis. Biniodide of mercury was administered internally, and within a week thereafter the swelling of the lid had become appreciably less, and by the end of a month had completely disappeared. The patient was told to continue the medicine, and he did so for some weeks. For a time he was lost sight of, but last summer he returned to the dispensary suffering from inflammation of the iris of his right eye, and this also improved very rapidly under antispecific medicines.

Paresis or paralysis of any of the ocular muscles is very frequently due to syphilis, and in many instances indicates the commencement of degenerative changes in the cerebrospinal system. The paresis may be so slight that no squinting is noticeable, but, if the patient sees with both eyes, he at once complains of double vision. It is well to remember that this diplopia may be of brief duration, and that it may pass off spontaneously without the aid of medicine, but it is nevertheless of serious import, and the more transitory it is the worse the prognosis, for it is then to be regarded as an early symptom of disease in the spinal cord, more particularly tabes dorsalis. This transient diplopia is occasionally accompanied by contracted and unequal pupils, and under such circumstances its significance becomes all the graver. In other cases the paralysis is much more profound, and sometimes one muscle after another becomes affected, until all the extra-ocular muscles are involved, and the ophthalmoplegia externa is complete. Similarly, the muscles inside the globe may be paralysed, giving rise to complete ophthalmoplegia interna. In such cases the prognosis is the less favourable the longer the interval of time between the primary infection and the appearance of the diplopia, and naturally it is much more serious in those who, from carelessness on their own part or from other causes, have not been subjected to a thoroughgoing course of antisyphilitic treatment at the beginning of their illness.

CASE III.—*Transient paralysis of right oculo-motor nerve, twelve years after primary syphilitic infection, and followed by atrophy of both optic nerves.*

A. H., æt. 49, was first seen on 7th November, 1894. She was then suffering from complete paralysis of the right third cranial nerve, and complained of giddiness and pain in her head, which had been present for about eight months. She said her right upper eyelid began to droop about a month before, at which time also she began to see double. Up to twelve years before, according to her own account, she had enjoyed excellent health, but about that time she had suffered from difficulty in passing urine, and a medical man whom she consulted told her she had syphilis. She was put under treatment and speedily recovered, but as she was leading a very irregular life at the time she did not continue to take the medicine prescribed. As far as can be ascertained from her own statements, however, any secondary symptoms were very slight. The only thing unusual which she remembered was that, six years before, her hair had fallen out in large quantities. From that time until the onset of the paralysis of the oculo-motor nerve, for which she sought relief at the Eye Infirmary, she continued as she thought in her usual good health. When she came to the dispensary, there was complete ptosis on the right side, and when the eyelid was raised she at once complained of double vision. It was found that there was a very marked divergent squint, and she was unable to move the eyeball upwards, inwards, or downwards. The pupil was fully dilated and fixed, and there was also complete paralysis of accommodation. There were no discoverable changes in the fundus oculi. No complaint of dimness of sight was made, but unfortunately the acuity of her vision at this time was not recorded, although my impression is that it was tested and found normal in both eyes. A mixture containing perchloride of mercury and iodide of potassium was prescribed, and after it had been taken for a month there was a marked improvement, and by the end of two months she had completely recovered. She was advised to continue the medicine, but neglected to do so. She was not seen again until the end of March, 1896, when she returned to the dispensary complaining that her sight had begun to fail, and when her visual acuity was tested it was found to be reduced to $\frac{6}{18}$ in the right eye, and $\frac{6}{12}$ in the left. No trace of the previous paralysis of her right third nerve could be detected, but the ophthalmoscope revealed distinct pallor of both optic discs, accompanied by a dimunition in the calibre of the retinal arteries, and it was easy to demonstrate that the field of vision was much contracted. Once more, however the patient was lost sight of, and it was not until the middle of February, 1897, that she again came under observation. She was now totally blind, her pupils were dilated and fixed, and there was complete atrophy of both optic nerves. Careful examination had all along been made for any signs of disease of the spinal cord, but each time with negative results. She now, however, complained that she was frequently troubled by severe flashes of pain in her legs, but patellar tendon reflex was still present, and there was no want of co-ordination in her movements. It is, however, probable that evidences of degeneration of the spinal cord will by and by supervene, and that the transient paralysis of the right third nerve, and the subsequent complete atrophy of both optic nerves, are to be regarded as pre-ataxic symptoms in a case of tabes dorsalis.

Inflammation of the cornea is not a frequent result of acquired syphilis, and this is all the more difficult to explain when it is remembered how frequent is the occurrence of interstitial keratitis in the inherited forms of the disease.

CASE IV.—*Severe inflammation of both corneæ, associated with the occurrence of frequent miscarriages and eruptions on the skin—History of syphilitic infection at least twelve years before the eyes became affected.*

The patient was a woman, æt. 32, who had been married thirteen years, and was infected by her husband during the first year of her married life. Her first child was born alive, but showed signs of inherited syphilis, and died before it was a year old. Thereafter she had repeated miscarriages, and suffered from skin eruptions, which her medical attendant recognised as syphilitic. She first came under my observation on 22nd May, 1895. Her left cornea presented a typical ground-glass appearance. There was marked injection of the limbus, and the pain, lachrymation, and intolerance of light were very intense. Atropine was instilled and fomentations were applied, and a mixture containing perchloride of mercury, quinine and iron was prescribed. The pupil dilated fully, but as there was no abatement of the symptoms a blister was applied to the left temple. The cornea, however, became more and more vascular, the blood-vessels forming a regular pannus, which invaded the cornea chiefly from above and from below. On the 24th July it was noted that there was a dense opacity, somewhat yellowish in colour, in the centre of the left cornea, the surrounding parts of which were covered by blood-vessels so numerous that they formed a dense layer which resembled red velvet. There were great ciliary congestion and intense photophobia, and the patient described the pain in her eye as "maddening." The tension of the eyeball remained normal. By the end of August the cornea began to clear at its periphery, and the pannus contracted very slowly centripetally until, in October, it formed a soft mass, which resembled a red berry projecting from the centre of the cornea. By this time, however, the right eye had become affected, so that the patient was now perfectly blind. The right cornea passed through changes exactly similar to those just described as having occurred in the left, but the pain and photophobia were much less. Treatment consisted in the regular administration of perchloride of mercury combined with tonics, the shading of the eyes from the light, the application of atropine with other sedatives both local and general for relief of pain, and the giving as much nourishment as the patient could be induced to take. Shortly after this the woman was confined to bed by an attack of "peritonitis," and did not again come under observation until February, 1897. She had taken the medicine very irregularly, but the vascularity had gradually disappeared from the cornea, and her sight had recovered sufficiently to permit her to see to guide herself about and work in her own house, though she was still afraid to go out of doors alone. The corneæ were marked by interstitial opacities and had their curvature considerably altered, but all abnormal vascularity had passed away, the tension was normal, and the pupils dilated fully under the influence of atropine.

The syphilitic virus attacks the uveal tract with great frequency, and often with peculiar virulence; and this is not to be wondered at when it is remembered how prone syphilis is to implicate the smaller blood-vessels—arteritis syphilitica—and this, too, even in those cases in which the secondary symptoms have not been severe. Of all the causes of iritis, syphilis is admitted to be the most frequent, and although it is difficult in the early stages to be sure of this diagnosis from the eye appearances alone, yet as the inflammation of the iris proceeds there often develop signs and symptoms so characteristic that all doubts are removed. When the iritis accompanies the sore throat and the cutaneous eruptions of secondary syphilis its cause is perfectly clear, and it is then merely one of the manifestations of the general disease; but it must be admitted that many cases occur where, in the absence of a syphilitic history, it is no easy matter to distinguish the syphilitic from the non-syphilitic form of iritis. Still, though every ophthalmic surgeon has formed in his own mind a clinical picture of the appearance presented by inflammation of the iris when it is the result of syphilis, yet of all the so-called characteristic signs—turbidity of aqueous, greasy spots on the posterior surface of the cornea, opacities in the vitreous, a degree of dusky red pericorneal congestion out of all proportion to the severity of the pain, which for the most part is circumorbital and nocturnal—none can be considered pathognomonic except the formation of gummatous nodules upon the iris, and situated for the most part close to the margin of the pupil. These nodules vary in size, and may not be visible until the pupil is dilated by atropine, when they are detected on those parts of the iris which are adherent to the anterior capsule of the lens. Syphilitic iritis, moreover, oftener than any other form involves both eyes, and although the one is as a rule affected after the other, yet it is by no means unusual to find both inflamed at the same time. Relapses in the form of frequently recurring attacks are not common, but iritis when due to syphilis is liable to be complicated with, or to be followed by, inflammation of the choroid and the retina.

CASE V.—*Syphilitic iritis, characterised by unusual turbidity of the aqueous, and by the large size of the gumma on the iris.*

The patient was a woman, æt. 28, who was seen at the Eye Infirmary on 25th March, 1895. Four months previously, shortly after the birth of a child, her right eye became inflamed. She said it did not cause her much pain, but "ran water constantly." There was a clear history of syphilis, and this was confirmed by a letter which was afterwards received from her family doctor. When she was first seen a greyish-pink vascular growth occupied the lower portion of the iris. This, however, was partially obscured by the great turbidity of the aqueous, which was almost milky in appearance in the lower two-thirds of the anterior chamber. There was an intense deeply livid pericorneal injection; but pain was remarkably slight, and, although the eye watered a great deal, there was very little intolerance of light. Perchloride of mercury was prescribed and atropine instilled, and after a week the turbid aqueous had become so transparent that the outline of the gumma on the iris could be clearly seen. It was now seen to be composed of a cluster of orange-red nodules, varying in size, and extending from the pupillary border into the substance of the iris for a considerable distance towards the periphery. Numerous roundish greasy-looking spots were now also seen on the posterior surface of the cornea.

Under the steady continuance of the treatment indicated the pericorneal injection gradually diminished, and the gumma rapidly disappeared. So rapid, indeed, was the progress of the case that in a few weeks the patient, considering that she was well, ceased to attend the dispensary. There is usually, however, considerable atrophy of the iris after the absorption of a gumma so large as was present in this case; but, as a rule, uncomplicated cases end in resolution, with more or less perfect recovery of eyesight.

When, however, the gumma extends backwards, and involves the ciliary region, the prognosis is by no means so favourable. Severe pain and photophobia are then constant symptoms, and in virulent cases the eye may be destroyed completely in spite of even the most energetic antisyphilitic treatment. One of the worst cases which has ever come under my own observation was that of a man who at the time his eyes became affected was suffering from a very profuse eruption in his skin, and from ulceration of his throat so severe as to be almost phagedænic. The left eye passed through the ordinary stages of acute syphilitic iritis, and recovered, leaving some points of adhesion between the iris and the capsule of the lens. When the left eye was almost well the right became acutely inflamed; the pain was very severe, and was circumorbital and markedly nocturnal in character; there was intense pericorneal injection with great tenderness over the ciliary region. In spite of the most energetic antiphlogistic and antisyphilitic treatment the disease continued to progress. At different points round the cornea the sclerotic became inflamed, and raised the overlying conjunctiva in circumscribed patches, violet-red in colour, and intensely tender to touch. Thereafter the cornea began to lose its transparency, and to bulge forwards. These very acute symptoms lasted for nearly a fortnight, and then gradually subsided; but the sclerotic, thinned as a result of its previous inflammation, allowed the choroid to shine through, and showed a slatey-blue discolouration. By and by, yielding to the force of the intra-ocular pressure, it first formed staphylomatous projections over the ciliary region, and ultimately became distended in its entire circumference, so that the eyeball was completely disorganised.

Sometimes the disease, instead of primarily attacking the iris and the region of the uveal tract supplied by the anterior ciliary and the long ciliary arteries, lays hold on the portion deriving its blood-supply from the short ciliary arteries—the choroid proper. Notwithstanding the direct continuity of the iris with the choroid, inflammation may confine itself to the one or to the other; but in acquired syphilis independent inflammation of the former is much more frequent than of the latter.

CASE VI.—*Severe choroiditis in both eyes, which occurred as one of the early secondary symptoms in an otherwise mild case of acquired syphilis.*

C. B., æt. 20, contracted syphilis in June, 1892, and mild secondary symptoms appeared in August, but his eyesight remained unaffected until about the beginning of December, shortly after which time he came under my observation. His visual acuity was then diminished to $\frac{6}{18}$, and both light and colour senses were markedly reduced. Ophthalmoscopic examination showed congestion with œdema of both optic discs, and great swelling and tortuosity of the retinal veins, while the fundus as a whole was too intensely red. In a very short time under the influence of antispecific remedies vision considerably improved, and on 23rd December the acuity was $\frac{6}{12}$ in the right eye and $\frac{6}{9}$ in the left. In the beginning of February, however, a great change for the worse occurred. He told me that suddenly, "in less than half an hour," his sight got quite blurred, and when he looked straight before him he could see nothing. He felt no pain at the time, but afterwards he occasionally experienced a dull aching across his forehead. He had been living in the North of Scotland, where the ground was covered with snow, and as the weather was fine he had been walking about a great deal, and although he never neglected to wear dark protective glasses, he complained that the bright light always produced a most unpleasant dazzling sensation in front of his eyes, and he attributed this sudden failure in his vision to the effect of the sunlight glancing on the snow. It was found that the visual acuity of the right eye was barely $\frac{6}{12}$, while that of the left was so reduced that the largest letters of Snellen's types were indistinguishable at the regulation distance. In both eyes there was a central scotoma, that in the left being much the larger, and roughly corresponding to the size of a watch held at four feet from his eye. A faint haze was seen over the macular region, but otherwise the ophthalmoscopic appearances were much as they were in December. A fly-blister was applied to the nape, and the sore was kept open, and when, a week afterwards, the patient was again examined his sight with the left eye had improved to $\frac{6}{36}$ and by the end of February to $\frac{6}{9}$. The vision of the right eye remained unaltered. The blister was now allowed to heal, but the medicines prescribed—perchloride of mercury one-eighth grain, with iodide of potassium 10 grs.—were continued. At the end of March his sight was fairly clear, but whenever he was tired he invariably suffered from a transient loss of visual power, and the sense of dazzling became most disagreeable. The improvement in vision was maintained until the middle of May, when "want of clearness" began to be troublesome, and was accompanied by a "glittering" in front of both eyes. A blister was again formed on the nape, and kept open for a month, and while it was discharging all the disagreeable subjective symptoms were decidedly less. Every one of them returned again, however, whenever the blister was allowed to heal, and towards the end of July it was suddenly discovered that the outlines of objects when looked at with the left eye appeared distorted. This distortion became so extreme that as the patient walked along the street some of the lamp-posts seemed irregularly crooked, while others farther off appeared as if they had been broken across, and the faces of the passers-by were so misshapen as to be unrecognisable. Blistering was again resorted to, and by the middle of September the distortion seemed to be getting rather less, and vision had improved so much that he was now able, to use his own expression, to "feel his way" through the letters of the test-types at the usual distance. Early in October the dazzling previously referred to became more pronounced, and as it was now accompanied whenever he walked by flashes of light of a "maroon" colour, succeeded by a "greenish-blue" haze in front of the eyes, it caused him great distress. The blister was kept open, and the form of the mercurial medicine was altered to a combination of blue pill, rhubarb, and quinine, with extracts of cannabis indica and belladonna. When he was again examined on the 4th of November he said he could now "take in better all that was round about him," and instead of groping slowly through the test letters he could see a whole line at a glance. Ophthalmoscopic examination showed that the inflammation was passing away from the optic discs, but numerous spots of soft-looking exudation of a light pinkish-yellow colour were visible over the fundus oculi. Sight again began to deteriorate, and numerous fine sooty particles showed in the vitreous, and presented to himself whenever he turned his eyes the appearance of black specks floating about in large numbers. Complaint was also made of the presence of some "greyish-black spots" of considerable size, which seemed always to remain stationary, and of a "whitish film," irregular in its thickness and in parts perforated as if it had been worn through, which, hanging like a veil in front of the centre of the eye, appeared to be the chief cause of the defective vision. The flashes of light and general dazzling were according to his own account not now so troublesome, but he described what he called a "gold-dust appearance," which, although not constant, always appeared whenever his eyes were exposed to light. When, however, they became accustomed to the light this appearance passed off, but if he then went into a darkened room something like a piece of goldleaf, irregular in its outline, appeared before the centre of each eye. It seemed to the patient that this appearance was due to a concentration of the gold-dust particles into one spot, because when the eyes were again exposed to light it appeared, in a time which was longer or shorter according to the degree of brightness of the light, to break up completely, and was replaced by the typical gold-dust appearance. These subjective phenomena gradually became less pronounced, and by the beginning of March the vision had greatly improved. His own description was that while formerly he always felt very blind on entering a room which was badly lighted, he could then see very much better in a dim light, and could read small print with comparative ease. The optic disc was quite well defined in its outline, and the patches of exudation had disappeared, but towards the periphery of the fundus there were numerous white areolar spots of choroidal atrophy, each surrounded by a densely pigmented border. From this time onwards progress was steadily and satisfactorily maintained, and in October the patient returned to college and found that his eyes were equal to the amount of work necessary for his ordinary studies. When he was tired or when he walked quickly there was still a tendency for the dazzling to return, but, with the exception that he now found it necessary to use a stronger light when reading than he required before his illness, he experienced no trouble from his eyes. Towards the end of November a peculiar papular eruption of a coppery-red colour appeared over his thorax, but passed off completely in a few weeks. When the patient was last seen he said that he was able to do a full day's work with his eyes without feeling the slightest inconvenience, and that his health as a whole was better than it had been for a very long time. He had been under treatment for exactly three years—from December, 1892, to December, 1895—and for nearly all that time he had taken mercury in one form or other, and for several months on each of four different occasions a blister was kept open on his nape. He was so convinced that this was productive of good that he felt somewhat reluctant to allow the blister to heal, and such personal experience of a patient corroborates my own firm conviction regarding the value of open blisters and setons in the treatment of all forms of deep-seated inflammatory diseases of the eye, more especially when these are of syphilitic origin; nor when proper care is taken with the dressing do these blisters or setons cause much discomfort.

The close proximity of the choroid to the ciliary body and the iris on the one hand, and to the optic nerve and retina on the other, renders it very easy for the inflammation to travel forwards in the one case, and give rise to a choroido-iritis, or to spread by contiguity of structure in the other, and set up a choroido-retinitis. Such complications invariably occur in all cases in which the onset is exceptionally acute, or in which antisyphilitic treatment is not carried out from the beginning with energy and perseverance.

CASE VII.—*Choroido-iritis in both eyes, the pupil in the one being occluded and the iris bulged forwards, while the ophthalmoscope revealed in the other clear evidence of choroiditis-disseminata.*

C. P., æt. 30, came to the Eye Infirmary in 1893. His left eye was quite blind, while with the right he could barely see to guide himself about. He had not evidently observed the failure of his left eye, and had sought no medical advice until he had been alarmed by the rapidly progressive deterioration in the vision of his right. There was a strong suspicion of syphilis. In the left eye the iris presented a characteristic greenish discolouration; the pupil was irregular, contracted, and occluded by inflammatory exudation, and its margin was so firmly sealed to the anterior capsule of the lens that the normal circulation of fluids through the pupil was impossible. The iris was in consequence pushed forwards, and presented the typical appearance of *iris bombé.* The tension was reduced, and it was very doubtful if there was even a faint perception of light with this eye. When the right eye was examined the true nature of the disease became at once apparent. There was a want of elasticity in the iris which prevented the pupil from dilating freely under the influence of atropine, the lens was muddy and the vitreous contained numerous opacities, and ophthalmoscopic examination also showed the existence of well-marked choroiditis-disseminata. Under the influence of antisyphilitic remedies vision somewhat improved, and after six months of medicinal treatment an iridectomy operation was performed, with the result that the sight became still better. This improvement was, however, of short duration, for with the advancing opacity in the lens vision again began to deteriorate. The cataract took nearly a year to mature, but at length it was possible to extract the lens. At first the result of this operation seemed very satisfactory, as the patient was enabled to discern objects and to walk about unattended; but after a few weeks the eyeball became painful, the tension was reduced, and there was great tenderness on pressure over the ciliary region. The aqueous chamber deepened, the iris became retracted, and it was not possible to illuminate the fundus with the ophthalmoscope. The patient was wholly unable to discern light from darkness. These acute symptoms gradually passed off, but sight never returned, and the eyeball slowly passed into the condition of phthisis bulbi.

The retina is implicated in every case of severe choroiditis, and such subjective phenomena as those included under the terms photopsia, chromatopsia, metamorphopsia, and micropsia are produced by irritation of its outer or sentient layer. Syphilitic retinitis, however, usually occurs somewhat late in the course of the constitutional disease, and most of the cases which have come under my own observation were women who had been infected years before the onset of the eye symptoms. It is needless to say that in every one of these cases treatment against the primary disease had either been wholly neglected, or, if begun, had been inefficiently carried out. Retinitis due to syphilis may, however, occur early, and one of the most characteristic examples of it which I have ever seen was the case of a medical student who, while attending a woman in her confinement, got his right forefinger inoculated, and who, when his sight began to fail, was still suffering from ulcerative paronychia. Both eyes were affected, the left, however, much more profoundly than the right. The chief complaints were of dimness of sight—the visual disturbance being for the most part central—of muscæ, of bright flashing of light, and of distortion of outline. The ophthalmoscopic appearances of the fundus were very characteristic. The whole background of the eye appeared veiled; and this mistiness, which was thickest over the central region, rendered the optic disc and the retinal vessels indistinct. No pigmentation of the choroid was visible; but, by careful inspection of the most clouded area in front of the papilla and the macular region, a fine dust-like appearance could be detected.

In favourable cases the filmy white cloud formed over the fundus entirely disappears. Probably a favourable prognosis might be given in the majority of cases if the patient would steadily persevere with proper treatment for a sufficient length of time; at least two years. In dispensary practice, however, it is usual to find that whenever vision has improved the medicine is neglected, with the result that sooner or later a relapse takes place, and by and by more or less of a cloudy haze settles permanently over the retina, which may also in the further progress of the disease become pigmented, the diminished calibre of the blood-vessels being accompanied by waxy pallor of the optic disc.

CASE VIII.—*Neuro-retinitis in both eyes, which occurred five months after the primary infection.*

J. B., æt. 26, contracted syphilis about the beginning of May, 1894. He did not observe the primary sore, and was unaware that anything had happened to him, until he began to suffer from sore throat. His hair also fell out in such quantity and so rapidly that he soon became quite bald. As the doctor whom he consulted at this time did not recognise the syphilitic nature of his condition, he became steadily worse, and it was not until three months afterwards, when he consulted another medical man, who at once prescribed antispecific remedies, that his symptoms began to improve. It was many weeks, however, before his throat healed; his lips and tongue became badly ulcerated, and notwithstanding the great improvement in his general health, his sight began to fail. The first eye symptoms were noticed in September, when he found some difficulty in reading small print. He said a peculiar haze every now and then rose like a mist before his eyes, and, if he were looking at a small object, prevented him from seeing it, and while it lasted his vision was very indistinct. When he tested his right eye alone objects appeared much smaller than they did when he saw them with his left. These symptoms alarmed him considerably, so he consulted an ophthalmic surgeon, and it is interesting to know that at this time, about the middle of September, there were no lesions discoverable in the fundus oculi by means of the ophthalmoscope. Although in every other respect he continued to improve, yet his eyesight steadily deteriorated, and when he came under my care on the 27th December, he was barely able to see the largest letters in Snellen's test-types with his right eye, but with the left his acuity was reduced only to $\frac{6}{9}$. His pupils were equal, and active, and the intra-ocular tension was normal, but the ophthalmoscope revealed very striking pathological changes in the fundus oculi. The right optic disc was prominent, congested, and very indistinct in outline, the veins were swollen and tortuous, and the region surrounding the macula was of a deep red colour, and dotted over by minute yellowish-white spots. The left fundus exhibited all the appearances characteristic of a mild attack of neuro-retinitis. He was advised to continue the mixture of perchloride of mercury and iodide of potassium, which he had been taking for nearly five months, and a blister was applied to his nape, and kept open by means d'Albespeyre's blistering paper No. 2. When he was again examined on 25th February, 1895, the vision of the right eye had very considerably improved, but the sight of the left was reduced to one half the normal acuity. He was urged to take his medicines with unfailing regularity, and when the blister healed, after having remained open for six months, a seton was inserted between his shoulders. He again reported himself to me in November, and he then stated that, as he had made such satisfactory progress, the seton was removed a month before, but since then, although previously the sight of both eyes had been steadily improving, the vision of the right had varied in a most uncertain manner, while that of the left had become decidedly worse, and objects appeared to it very much smaller than they really were. The ophthalmoscope revealed marked lessening of the signs of inflammation in the right fundus oculi, but the left optic disc was now very woolly in appearance, and the retinal veins were tortuous and congested, while in the macular region appearances existed very similar to those described as formerly present in the right eye. Leeches were applied to the left inner canthus, and the bloodletting was followed speedily by considerable improvement in sight. A few days after a seton was again inserted and kept steadily in use with but little interruption until January, 1897, the antispecific remedies having all that time also been taken with great regularity. At that date the vision of either eye was almost equal to the normal standard, but the patient's own statement was that he could see more clearly with his left eye than with his right, the macular region of which now presented a pigmented area dotted over with white spots, which, however, were irregularly placed, and did not show any trace of the stellate arrangement characteristic of some other forms of retinitis. As there were still in both eyes some floating bodies in the vitreous, and as the retinal vessels were congested, it was advised that a seton be worn continuously, and that the biniodide of mercury be taken regularly, for at least six months longer.

It now remains to consider those eye diseases which are due to the inherited form of syphilis, and at the outset it may be remarked that while on the one hand there are few eye affections originating in the mesoblastic structures of the globe, which may not be the result of some hidden venereal taint, yet, on the other hand, it must be admitted that it is often extremely difficult to obtain a clear specific history even in those, which some assert never occur except in children of syphilitic parentage. Every suspected case ought therefore to be submitted to careful and thorough examination, and treated on its own merits. Eye diseases, when due to intra-uterine inflammation, may show themselves at birth, but it is more usual for the symptoms to appear during the early months of infancy, and in many cases they are not revealed until the period of puberty is reached. The injurious effects of hereditary taint may manifest themselves in the deep as well as in the superficial structures of the eyeball. Iritis of a mild type is not an uncommon disease in infants born of syphilitic parents. It usually appears when the child is about five months old, and girls are affected more frequently than boys. It is sometimes complicated by congenital cataract, and the margin of the pupil is then deeply pigmented, and firmly adherent to the capsule of the lens. When the mothers of these children are examined it is often found that they have become infected with syphilis during pregnancy, and that although the infant was apparently quite healthy when it was born it afterwards developed snuffles, eruption on nates, and other of the well known signs of inherited syphilis.

CASE IX.—*Choroiditis in both eyes in an infant, accompanied by sudden development of well-marked nystagmus—History of syphilis in the mother at the time of the pregnancy.*

Mrs. B., æt. 24, was a strong healthy woman up to the time of her marriage in June, 1894. Two months afterwards she suffered from head pain so severe as to disturb sleep, an ulcerated throat, and a coppery-coloured eruption all over her body. She consulted her doctor, who at once prescribed anti-specific medicines. Just about this time she became pregnant, and acting upon the advice of her medical attendant she continued to take her medicines during the whole course of her pregnancy. In June, 1895, she was safely delivered of a female child. The infant was small, but appeared healthy, and after the first few days it was weaned and brought up on the bottle. It did not thrive well, however, but became pale and puny. When it was a month old mercurial inunction was begun, and continued for two months, and grey powder was administered internally. Within the time stated the child's health improved so much that this treatment was discontinued, and for two months more all seemed to go well, the only thing that was remarked being that the child had a peculiar habit of staring steadfastly at bright light. When it was five months old, however, nystagmus suddenly appeared in both eyes, and it was at this time that the infant first came under my observation. The staring expression on the face was very noticeable. The pupils were large, but equal in size and reacted, although somewhat sluggishly, to the stimulus of light. The oscillatory movements of the eyeballs were so pronounced that it was very difficult to make a satisfactory ophthalmoscopic examination. It was seen, however, that the optic discs were small and pale, and that the retinal blood-vessels were reduced in calibre, while the whole fundus presented the appearance of having been dusted over with coarse grains of black pepper. The mercurial inunction was resumed, and in three weeks' time the nystagmus quite disappeared, and it has never returned. The child was not seen again by me for more than a year, during which time it had given to it regularly the medicines prescribed by the family doctor. When I examined it again at the end of this period, the mother stated that for several months previously she had not observed anything peculiar about the child's eyes, and so far as she could judge its sight was perfectly good. The staring expression was not now so noticeable, and there was not the slightest quivering motion to be detected when the eyes were exposed to light. The ophthalmoscope, however, revealed that both optic discs were still small and pale, and that scattered over the whole fundus were numerous spots of black pigment, with here and there a small white patch, the result of choroidal atrophy.

By far the most important affection of the eye in hereditary syphilis is, however, interstitial inflammation of the cornea. It usually occurs between five years of age and twenty, but it is occasionally present during intra-uterine life. Not long ago a baby was brought to the Eye Infirmary with a well-marked congenital opacity in the substance of its right cornea, evidently due to fœtal keratitis. The left cornea was greatly increased in size and the eyeball was enlarged uniformly in all its dimensions, giving rise to that condition designated as buphthalmos or ox-eye. The medical man who sent this case told me that the child's parents had suffered from syphilis.

True interstitial keratitis is seen oftener in girls than in boys, and in those who are predisposed to it a very trivial exciting cause is sufficient to determine an attack, the prominent symptoms of which may be described as follows. At first the child has difficulty in facing the light, and when the eye is examined a few small greasy-looking spots are to be seen in the substance of the cornea, the surface of which is rough but not as a rule abraded. The inflammation starting from these foci spreads rapidly until the cornea completely loses its transparency and comes to resemble a piece of ground glass. The blood-vessels of the limbus are congested, and the amount of pericorneal injection, taken along with the degree of photophobia and lachrymation, forms a good indication of the severity of the attack. Fringes of minute blood-vessels not only traverse the surface of the cornea but also invade its substance, and as a result of this vascular injection the ground glass appearance is lost and the cornea assumes a rusty colouration, while in some cases the vascularity is so great that it becomes like a piece of red cloth. Since these newly formed blood-vessels encroach upon the cornea from its margin, an area in its centre usually remains uninfected. This is of a yellowish-white colour, and somewhat resembles an abscess, but the formation of pus or the occurrence of ulceration is exceedingly rare. At this stage the intolerance of light is so extreme that for the most part the eyes are kept firmly closed, and the blepharospasm and lachrymation contribute to form a fissure at the outer canthus, the presence of which causes intense pain whenever the eyelids are forcibly separated. In a time varying from a few weeks to several months the vascularity lessens, and, with the disappearance of the blood-vessels, the cornea will begin to clear up, and in a mild case will regain its transparency in a comparatively short time. It may be here stated, however, that when a mother is infected at conception or during the early months of pregnancy the child will suffer acutely, and if its eyes become affected the keratitis is always severe and takes years to run its course. Eyes which have passed through an attack of interstitial keratitis are, however, easily recognised by a peculiar lack-lustre appearance of the iris and the increased depth of the anterior chamber; and sometimes the scars of a pre-existing choroido-retinitis are detected by ophthalmoscopic examination. Just as the one eye is recovering its fellow generally begins to suffer, as in nearly every case the disease is symmetrical, although it rarely begins in both eyes simultaneously. The average duration of a mild attack is from three to nine or twelve months, but many cases run a much more protracted course, and that too in spite of careful medicinal and hygienic treatment. The more severe the attack the denser is the infiltration of the corneal substance, and the less likelihood is there that it will recover perfectly. Nebulous opacities are apt to remain permanently, and these, although so slight as to be barely visible unless the eye be carefully examined, always greatly interfere with the normal acuity of vision. Moreover, the curvature of the cornea is also altered so much that a high degree of astigmatism is produced. In all severe cases the iris becomes implicated, and the inflammation travelling backwards involves the choroid and retina. These complications are all the more likely to occur if during the course of the keratitis any acute illness supervenes. I have at present a case under my care where the patient just as she was recovering from a moderately severe attack of interstitial keratitis was seized with acute tonsillitis. Almost immediately the tension of both eyeballs became much reduced, and the corneæ more opaque than ever they had been before. It is now four years since this occurred, but the corneæ are still flattened and densely opaque in their central portions, and although the intra-ocular tension has considerably improved, vision is reduced to a perception of light. Synovitis of the elbow and the knee-joints, periosteal swellings of the long bones, &c., &c., most frequently also occur in those cases where implication of any portion of the uveal tract has taken place.

Interstitial keratitis, when due to hereditary syphilis, is always associated with certain peculiarities of physiognomy, and although all the appearances about to be described are rarely to be seen in the one patient, yet when even a few of them are found in combination they constitute most trustworthy evidence of the existence of hereditary taint. The conformation of the face is somewhat angular, the features are contracted and drawn, the skin is coarse, and the complexion is pale and earthy. The forehead is prominent, and the skin covering it is thrown into wrinkles through the frowning incidental to the long suffering from fear of the light. The bridge of the nose is depressed and may be completely sunken as a result of loss of the bones from syphilitic ulceration, and, from a similar cause affecting the skin, the angles of the mouth and alæ nasi are scarred and fissured by white cicatrices. The teeth are often stunted in their growth, peg-shaped, and irregularly placed, and most characteristic of all is the notching of the upper central incisors of the permanent set. Some of these patients are abnormally precocious, while others are dull and stupid. In a certain proportion of cases the suffering produced by defective sight is augmented by impairment of hearing. The deafness is sometimes due to disease of the middle ear, connected with ulceration of the throat and perforation of the palate, and then the power of hearing may return to a certain extent as the otitis media improves. When, however, there is inflammation of the auditory nerve the hearing is lost rapidly, and the patient becomes stone deaf for the remainder of life.

REMARKS PRECEDING A DEMONSTRATION IN THE GLASGOW ROYAL INFIRMARY, 14th MAY, 1897.

By J. K. KELLY, M.D.,

Physician for Diseases of Women, Glasgow Royal Infirmary;
Lecturer on Gynæcology, St. Mungo's College.

In our department for diseases of women we have thirteen beds. In these, during the six months from the beginning of October to the end of March, we have had 108 cases under treatment. When a patient is admitted she is bathed and cleaned before being put to bed, and, unless directions are given to the contrary, every patient has a hot vaginal douche of weak carbolic solution night and morning. This rule has been made because, with very few exceptions, disease of the pelvic organs is associated with catarrh of the cervix, and the hot vaginal antiseptic douche is the simplest, perhaps even the best, and certainly the safest of all the remedies for that condition.

A vaginal douche, however, is not always safe. For example, on 20th February we admitted a patient who came in from the country with advanced cancer of the cervix. The note made of the condition *per vaginam* was in these words:—"Cervix and upper part of vagina are represented by a large lobulated mass of solid tissue, behind the middle of which the finger enters a deep ulcerated cavity. There is no mobility of the uterus, and the hard mass seems to extend all round to the pelvic wall."

This patient had the usual douche on the evening of admission and on the following morning; but when she was receiving her third douche a very startling occurrence took place. The house surgeon's report is:—"To-night, while patient was having her vaginal douche, nurse noticed that there was no return flow. The douche was stopped when a pint or more had been given. A few minutes later patient had a convulsive seizure, and became collapsed." The report made by the staff nurse, and handed to me when I arrived here in response to a telephonic message, is as follows:—"Patient had a vaginal douche about 6·35 P.M. She did not complain of pain or anything while having it. Whilst having the douche Nurse Thomson called my attention to the solution not being returned. On the nozzle being removed and pan taken away she extended both arms and turned herself from her right side to her left, and turned again on the back. She was quite unconscious. On trying to give a teaspoonful of hot brandy and water, her teeth were found to be firmly clenched." What had happened was that over a pint of 2 per cent carbolic solution had been thrown suddenly into the peritoneal cavity, and the patient was almost killed, and killed instantaneously, by the shock. Fortunately, in this case the effects of the shock and the carbolic acid poisoning passed off in a few hours. The patient felt better next morning than she had done for some time; the rapid absorption of so much fluid seemed even to have a stimulating effect, and as we had told her we could do nothing for her case, she insisted on going home at once.

The danger, however, which is illustrated in this case, of injecting fluid into the peritoneum from the vagina, must arise very rarely. I know of only one other case—a case which occurred many years ago in my own private practice—of vaginal douche shortly after confinement, in which possibly the fluid passed through uterus and Fallopian tube, and set up an immediate peritonitis. But in that case we had not a clear report of the absence of the return flow of the injected fluid. It is a danger, therefore, too remote to induce us to alter our rule, especially in the class of cases we have chiefly to deal with here.

Among the 108 patients admitted we have naturally had all varieties and grades of disease, and we may take them as fairly representative of all the ailments, except perhaps the most trivial, that come under the term "Diseases of Women." In other words, the proportion we meet with here of cases, say, of cancer, to other diseases of the pelvic organs, may be accepted as pretty nearly the proportion actually existing in general practice in this neighbourhood.

To take cancer first, seeing we have already mentioned it incidentally, we have had 12 cases—that is, about 11 per cent of the whole. This looks a very large percentage, and may possibly be so to some extent, owing to all patients suffering from cancer being ultimately forced to appeal to medical aid; while in many diseases of women the symptoms are negligable, and are endured by the patients as part of the ordinary woman's lot in life. On the other hand, while circumstances have sometimes compelled us to receive patients, like the one already referred to, for whom we could do nothing, we have had cases sent us whom we did not admit, and who therefore do not count in our number. On the whole, I am rather inclined to believe that the proportion of 11 per cent is not much higher than the natural one, and at the very lowest estimate it represents a frightful prevalence of uterine cancer among our population in the West of Scotland. The reason for this is probably to be sought for in the slight regard that was given up till quite recent years to the diseases of women. During our medical curriculum there was no teaching in this subject, and it was the habit of the medical profession to regard the special ailments of the female as deserving only slight consideration. When Jas. Y. Simpson began to practise gynæcology there was even a suspicion in some minds that he was encouraging immorality! As the result of this attitude of the medical profession—an attitude which was maintained, I may say, from the beginning of medicine in this country until very recently—the great mass of women themselves came to regard suffering as part of their normal condition, and even now pain in the back, and leucorrhœa, and even hæmorrhage are often, if not as a rule, disregarded until they reach such a degree as to affect the general health and the working capabilities of the individual.

Now, there is no doubt that the frequency of cancer in the uterine cervix is due to the frequency of catarrh of the cervix, the most common of all the diseases that affect women. It is the neglect of this disease, and its persistence throughout a long series of years, that leads to the development of malignancy in the cervix.

It is this same neglect to which is due the other fact that the large majority of cancer cases are far advanced before they are brought to the gynæcologist. Of the 12 cases admitted here only 2 were at such a stage that we could attempt total extirpation, the only operation that gives any hope of cure. All the other cases were beyond the stage when such an operation is possible, and the utmost that could be done was to relieve the suffering and check the discharge for a time.

With regard to these 12 cases, there is a remarkable fact that deserves special mention—50 per cent of them were below the age of 40:—

1	aged	31	years.	1	aged	43	years.
1	„	32	„	1	„	44	„
1	„	33	„	1	„	45	„
2	„	35	„	1	„	47	„
1	„	36	„	1	„	52	„
1	„	41	„				

If we are to take this fact as meaning anything—and the numbers are, of course, too small for us to lay much stress on them—it indicates a greater inattention to the prevention of cancer in the West of Scotland than elsewhere, the proportion usually given for cases below 40 years of age being not 50 per cent, but something like 24 or 27 per cent.

The more I consider the subject the more I am convinced that the only hope of reducing the frequency of uterine cancer lies in our insisting that there is not in the female any more than in the male any abnormal symptom that can be safely neglected. Neither pain, nor leucorrhœa, nor hæmorrhage is natural to the female any more than to the male. There is, of course, no difficulty in accepting such a statement as a theory, but when we come to act upon it in practice we find it difficult to induce women to use the necessary measures for the removal of these morbid conditions. In fact, a deep-rooted prejudice exists in favour of the natural morbidity of the weaker vessel. A great advance, however, would be made if the medical profession were itself thoroughly convinced of the serious importance of curing what are called the minor ailments of women. It is only through the medical profession that the general public can attain to more enlightened views on the subject. "Obsta principiis" is a more life-saving instruction than the most elaborate directions and preparations for hysterectomy.

Among our 108 cases we have had eight cases of salpingitis. It is not many years since disease of the Fallopian tube was considered rare. There was a joke at one time—due, I think, to Spencer Wells—that they were only manufactured in Birmingham, where Lawson Tait was strenuously insisting on the frequency and importance of tubal disease. The difficulty of subjecting the tube to a physical examination no doubt accounted for the fact that tubal disease escaped recognition till recent years, but when we consider that disease of the uterus is so frequent, and that the tube is merely a prolongation of the uterus, we ought rather to be surprised if tubal disease were infrequent. I would not like to assert that catarrh of the Fallopian tube is as frequent as a cold in the head, but there is no doubt that much of the occasional pelvic pain from which women suffer is due to transient catarrh of the tube. It is only, however, when other causes are in operation besides the causes of catarrh—whatever these may be—that tubal disease becomes a serious matter, and when it has reached this stage it is not usually very difficult of diagnosis if a careful examination of the pelvis is made, especially if the examination is made under chloroform.

The symptoms suggestive of tubal disease are usually (1) pain in one or other or both sides of the pelvis, frequently spasmodic in character, usually preceding the menstruation, and, if constant, usually worse at menstruation; (2) disturbance of menstruation not only in the direction of increased quantity but also in the direction of increased frequency; (3) one or more attacks of apparent inflammation of the bowels; and (4) deterioration of the general health. Such a group of symptoms at once suggests tubal disease, but certainty is only to be reached by detecting on examination the existence of a tumour lateral or posterior to the uterus and connected with the uterus at the angle. As may be seen from the specimens, the tumour may vary greatly in size. Here, for example (Mrs. H.), is a specimen the chief mass of which was an enormous left pyo-salpinx coiled round the ovary, with which it was inseparably connected. In order to remove it we had also, as you see, to remove the uterus, dividing it through the cervix. This other large specimen (Mrs. B.) consists of a large left hydro-salpinx, a small right pyo-salpinx, and the body of the uterus as in the last case. This specimen is interesting from the diagnostic point of view. The note of the pelvic examination was as follows:—"The uterus (which was nulliparous, the woman having had a miscarriage eight months before, but no children) is found to be small, depressed in position, and very strongly anteflexed. It is carried towards the symphysis by a large cyst occupying the right posterior part of the pelvis. On the left side a smaller cyst is also felt closely applied to the one formerly mentioned. On both sides the tubes seem to lead into the tumours." A diagnosis of a double pyo-salpinx was made, and we supposed that the right tube formed a large cyst, filling the right side of the pelvis and Douglas' pouch, while the left tube formed only a small cyst. I may read the description of the operation:—"A large left hydro-salpinx was found, from which 14 oz. of fluid were removed by the aspirator in addition to 2 or 3 oz. lost. There was also a small right pyo-salpinx containing about 1½ oz. of pus. The lower end of omentum was firmly attached to right angle of uterus and to the inner end of the right tube, where there had evidently been some oozing of pus. From the external appearance of the parts it was considered that the pus extended into the uterine portion of the tube. Accordingly, after removing the hydro-salpinx and tying off and dividing the attached portion of omentum from the rest, it was considered advisable to remove both uterus and pyo-salpinx together, which was done. The stump was sewn over with peritoneum, during which it was remarked that the uterine tissue was much more friable than usual, and in some parts hardly permitted of stitching." In our examination we had not recognised that the left tube had descended so as to cross the middle line and form the chief mass of the tumour on the right side, while the right tube formed only a small portion of that mass.

These large tumours may be contrasted with this other specimen (Mrs. A.). But in this case also the physical signs had led us to expect a large cyst. The note of the physical examination is as follows:—"Resistant swelling felt in region of right Fallopian tube, extending from rather to left of middle line to level of centre of Poupart's ligament. Upper border about level of anterior superior spine. *Per vaginam* cervix is low and pressed towards pubis. Immediately behind it the posterior fornix is bulged down by a rounded elastic swelling, the chief mass of which extends towards the right side. The most painful spot is in Douglas' pouch, where there is some irregularity of surface. Uterus, 3 in. long, passing up in front of tumour. It is so raised by the tumour that the origin of the appendages from the angle of the uterus cannot be made out on either side. *Per rectum* the posterior surface of tumour presents the feeling of loculi united by adhesions, but the tumour does not distinctly bulge into the rectal lumen." Here, then, we had all the signs of a large cyst, and I expected to find a tubal cyst something like the size of those I have just shown you, and probably containing pus. It had grown rapidly in size, having more than doubled in the course of a fortnight, as we knew from our own observation, and I expected to find that pus had escaped beyond the tube and would be found in loculi formed by adhesions in the pelvis and probably between coils of intestine. At the operation, however, the loculated tumour was found formed almost entirely of coils of intestine firmly matted together, while the tube, the origin of all the evil, was only the small tender part lying deep in the bottom of Douglas' pouch, where it was densely adherent, and out of which it had to be peeled as you peel an orange away from its skin.

When the tube is sufficiently diseased to give rise to a tumour, there is no satisfactory treatment for the condition short of excision of the tube. If the patient is in a condition to remain an invalid for a series of years, there is no doubt that even a pus tube may undergo a species of cure, but this is at best a remote possibility, and the invalidism may just as probably become a permanent condition, while it is liable at any time to be rudely interrupted by some dangerous peritonitic attack. In the class we have under our care here, such a *laissez faire* treatment is out of the question, and we always recommend operation. The recommendation, of course, is not accepted in every case, some patients shrinking from the immediate risks of operation more than from the continuance of their habitual suffering with all its attendant risks. Among our eight cases this half-year, we operated on three; three refused operation; one took a severe pneumonia just when we had arranged for operation, and after a somewhat tardy and unsatisfactory recovery was sent to the convalescent home to recruit; the other had symptoms of acute pulmonary phthisis with hæmoptysis, and was not in a condition for operation.

Closely related to these cases of salpingitis are those of ectopic pregnancy, of which we have had four in the course of the half-year. This condition must be much more common than we have been in the habit of believing. We have at present two, and possibly three, cases in the ward in addition to the four we had during the half-year ending in March, and I remember that in 1894, when I acted here during Dr. Stirton's holiday, we operated on two cases in one month. If we were on the outlook for such cases it would not be difficult to find them, and extra-uterine gestation should always be counted as one of the possible causes of any severe sudden illness manifesting pelvic symptoms, In any such case a careful inquiry into the history of the patient may bring out a very clear and thoroughly convincing explanation of the symptoms present. As an illustration, I may read the report of one case. Mrs. W., aged 20, was admitted on 18th February, 1897, in a condition of extreme exhaustion. She had been married nine months; had a miscarriage in August, 1896, at about four and a half months. From this recovered perfectly, and menstruated regularly till early in December. From that time till end of January—a period of seven weeks—there was no menstruation. During this period she had occasional slight crampy pains in the hypogastrium, pains and soreness in the breasts, but no morning sickness. At the end of January she was seized with severe hypogastric pain, with sickness and vomiting, followed by a discharge of blood from the vagina—not, however, in such quantity as she had at the abortion in August. From that time till admission to hospital—*i.e.*, for three weeks—the pain and discharge continued. Patient had no rigors, or sweats, or headaches until the day before admission, but the hypogastric pain had increased in severity, menstruation had become painful, and there was constant desire to go to stool. On examination the uterus was found slightly displaced to the right. The left fornix was occupied by a rounded mass presenting semisolid consistence, with here and there irregularities like small clots. Pulsation in the fornices was very distinct.

The history and physical signs left no doubt as to the nature of this case. A tubal pregnancy had gone on for seven weeks, till the end of January. Then a rupture of the tube had taken place, without, however, such excessive hæmorrhage as often constitutes the most imminent danger in these cases. Intermittent hæmorrhages had continued, and when she was admitted, peritonitis was beginning to add a new danger to her condition. At the operation the day after admission we found that a tubal abortion had taken place, the ovum having been settled in the ampulla of the tube near the fimbriated end, where we found chronic villi and decidual cells. The embryo itself was not found among the blood-clots.

I may read you a few notes of another case, of which, unfortunately, I can show you the parts *in situ*, as the patient died of septic peritonitis after the operation.

This was the case of Mrs. G., aged 33, who had had one child sixteen years before, had led an irregular life, and had had both gonorrhœa and syphilis. After the birth of her child, which had been stillborn, she had a severe pelvic inflammation. Three and a half years before admission she visited the dispensary, where I noted that the uterus was fixed in adhesions, and the left broad ligament was full and tender to pressure, but presenting no distinctly outlined tumour. She was admitted on 7th December. Her illness had begun three weeks before. One morning, feeling in her usual health, she rose to make breakfast, and suddenly a severe pain in the hypogastrium came on, so that she fell down on the floor, and became so weak that for three or four days she was hardly able to move. She had not menstruated for three months, but along with the pain a vaginal discharge set in, which continued for several days, but was not excessive in quantity. There had been no distinct symptoms of pregnancy, but her breasts were enlarged and painful, and she supposed herself pregnant. After the attack of pain she had such a feeling of bearing down that she thought she would miscarry, and she sent for her doctor. He evidently considered that there was some tendency to prolapse, and inserted a ring pessary. On admission, the pelvic examination revealed a large hæmatocele bulging down the posterior vaginal fornix, and causing the feeling of prolapse that the woman complained of. The uterus was pushed forward against the symphysis, and there was a good deal of pain on examination. In this case, unfortunately, I did not operate at once, but waited in the hope that the hæmatocele might undergo absorption. When we were ultimately forced to operate, we found the condition that may still be seen somewhat imperfectly in the specimen. The fœtus lies in a sac formed partly by the right Fallopean tube. This sac was covered by omentum, which was adherent over it. The pouch of Douglas was filled with decomposing blood-clot, and the left appendages were so destroyed by disease that even on dissection after death the tube and ovary could not be distinguished. We may say that it was unfortunate for this woman that her right appendages were less diseased than her left. To compare with this, I show you a specimen of a right tubal pregnancy at an earlier period, where the ovisac is still unruptured, though the tube in which it had been enclosed had ruptured and permitted the ovum to protrude. I published an account of this case some years ago in the *Glasgow Medical Journal*. It was the first case of tubal pregnancy I had met with.

But I must not spend more time over ectopic gestation. I merely show you the parts removed in the other cases that we have had in the ward.

Of the other accidents attending pregnancy we have had eleven cases of puerperal inflammation. This, I think, indicates a higher proportion than we ought to have in the present state of our science, and points to a continued neglect of antiseptic precautions on the part of those attending parturient women, and an ignorance of the dangers attending labour on the part of the poorer classes of our population. On the other hand, it is matter for congratulation that we have had only two cases of urinary fistulæ to deal with, and of these only one was due to parturition, the other having been caused by the wearing of a bad pessary. This rarity of fistula, I think, points to a better management of the process of labour on the part of our practitioners. Fistulæ, there is no doubt, were mostly due to difficult labours being formerly left to " the powers of Nature," which, as they had no personality, could easily bear the blame of mismanaging labour. In these days we recognise more clearly than formerly that disease itself is one of " the powers of Nature," and that it is our duty to oppose these powers when they are hostile to the individual.

We have had four cases of ovarian cystoma, one of them associated with cancer of the rectum. We have had one case of parovarian cyst, and we had a peculiar case that we regarded as parovarian, but which proved to be a sacculated ascites. The physical signs were noted as follows:—" The whole lower part of abdomen is occupied by a flaccid cyst. Percussion dulness reaches 2½ inches above umbilicus. From that point the dulness extends outwards and upwards to the hypochondriac regions and flanks. Change of position produces little change in dulness in flanks. *Per vaginam*, the whole right side of pelvis is occupied by lower zone of cyst felt in abdomen, under surface being somewhat irregularly lobulated. Uterus thrown to left, sound passes 2½ inches, knob looking towards the right. Uterus presents ordinary nulliparous characters." At the operation, the cyst, instead of being parovarian, as we supposed, was found to consist of two large encysted peritoneal collections, separated completely from each other by a vertical septum. When emptied, the floor of the left sac was seen to be marked by the fundus uteri, the round ligament, the tube, and the ovarian ligament all distinctly outlined and prominent. In the floor of the right sac the ligaments were less marked, but the ovary projected into the cavity, and as it was diseased was removed. The general peritoneal cavity was not opened, but at the upper part of the abdominal wound the small bowel was only separated from the cyst by a fine meshwork of areolar tissue.

Pronounced malformation of the pelvic organs is rare in adults. We have had only one case of vaginal atresia, resulting in accumulation of the menstrual discharge so as to form an abdominal tumour. We have had four cases of uterine atrophy, resulting in more or less complete amenorrhœa, but in these cases, except for the small size of the uterus, and possibly of the ovaries as well, there was no distinct malformation.

Herewith is a tabular statement of the 108 cases admitted. Any such statement, however, is naturally very imperfect, and is useful only in bringing out prominent facts, such as that I have referred to regarding the frequency of cancer. Few cases, we might say no cases, of uncomplicated disease of one organ are met with. Along with the uterus the tube, and along with the tube the ovary and peritoneum, are involved in disease, and so with other parts. Even in such a condition as retroversion we have not infrequently a difficulty in saying where retroversion ends and prolapse begins; a retroversion being the natural first stage of a prolapse. The tabular statement must, therefore, be taken simply as giving a general view of the cases admitted, but even as a general view it will be interesting.

Metritis,	21	Cancer of rectum,	2
Retroversion,	13	Oöphoritis,	2
Cancer uteri,	12	Fistulæ,	2
Puerperal inflammation,	11	Pregnancy,	2
Salpingitis,	8	Hernia,	2
Parametritis non-puerperalis,	5	Vomiting of pregnancy,	1
Abortion,	4	Parovarian cyst,	1
Ectopic gestation,	4	Encysted ascites,	1
Ovarian cystoma,	4	Anæmia,	1
Atrophy of uterus,	4	Mobile kidney,	1
Myoma,	3	Atresia vaginæ,	1
Prolapse,	3	Hæmatoma of vulva,	1
Vesical disease,	3	Renal calculus,	1

CASES OF CYSTIC DISEASE OF THE KIDNEY, WITH SPECIAL REFERENCE TO THEIR PATHOLOGY, DIAGNOSIS, AND SURGICAL TREATMENT.

BY DAVID NEWMAN, M.D.,
Surgeon, Glasgow Royal Infirmary.

(*Continued from* p. 338, vol. xlvii.)

PATHOLOGY.

I HAVE examined a large number of specimens of chronic tubular and interstitial nephritis, and have frequently found them to contain cysts of all sizes—from mere microscopic expansions of the uriniferous tubules to cysts capable of containing several drops of fluid. When the cysts are numerous the disease appears to be uniformly distributed, and the whole kidney is converted into a conglomerate mass; but if the cysts be few in number and small in size they will be found most abundant in the intermediate zone between the medulla and cortex—viz., in the zone of limitation. In many specimens plugs of colloid material are seen, usually at a part of the uriniferous tubule where constriction has occurred; above this the tubule is irregularly distended and contracted, so as to form a chain of minute cysts. The capsule of the cyst is formed by the connective tissue of the kidney, which is generally increased in amount and firmer in consistence than normal, but may be so scanty that one is almost led to believe that the boundaries of the cyst are formed of little more than the basement membrane of the uriniferous tubule. The epithelium lining the cyst is, as a rule, flattened and atrophied, and the contents frequently escape in preparing the section, even when the celloidin method is employed. The paraffin method of imbedding was used with good results even in advanced disease. Associated with the dilatation of the uriniferous tubules there is generally marked atrophy of the rest of the parenchyma of the organ, and, as far as I have observed, always more or less interstitial nephritis. Whether the tubules become obstructed by epithelial *débris* or tube-casts from within, or by the contraction of the inflammatory connective-tissue products around them, is a question at present difficult to answer. Probably both causes exercise a considerable influence in the production of the diseased condition. Cysts of small size are frequently observed in the cortex, and owe their existence to a constricted condition of the neck of Bowman's capsule, or obstruction of the tubule close to the Malpighian body.

I believe that the disease is the result of a localised cirrhosis of the kidney causing obstruction of the orifice of the Malpighian capsules or of the cortical tubules; in other words, they are retention cysts. In most of the specimens I have examined the smaller cysts are in the medulla, and the larger cysts in the intermediate zone, while in all instances in which cysts have been found there has been at the same time more or less large collections of inflammatory cells separating the tubules from one another. Probably on account of this interstitial hyperplasia, many other theories have been advanced to explain the etiology of the large polycystic kidney; and at the same time the view that cirrhosis is an essential factor in the causation of cystic degeneration has been controverted on the ground that, while cirrhosis of the kidney is common, cystic degeneration is rare, and even in cases of disease of the kidney where the tubuli are blocked by casts or otherwise, cysts may not be found.

The other theories offered to explain the pathology of cystic degeneration are, briefly, that cystic kidney is due to the presence of embryonic rudiments—retained remnants of the Wolffian body—that there is a combination of mesonephros with metanephros, and that the cysts in the kidney are due to late development of these rudimentary cells; indeed, retention cysts originate in the tubules of the Wolffian body. Kölliker's view is that the renal tissue is formed by tubular extension from the branching upper end of the ureter, and if this view be accepted, one can understand how congenital cysts of the kidney may be due to want of differentiation of the metanephric blastema from that of the mesonephros. It is true that remnants of the Wolffian body are widely distributed, and may be found in the ovary and testicle, and in these situations may give rise to cysts. Remnants, however, of the Wolffian body have not yet been demonstrated in the kidney; if, however, fragments of the Wolffian body were found in the kidney, the discovery would be strongly in support of the embryonic origin of cysts. The congenital theory is supported by the circumstance that cystic degeneration is frequently associated with congenital malformations and other deformities. I have observed cystic kidney coincident with malformations of the aortic valves, of the septum ventriculorum, and cases have been recorded where other deformities have been found. This frequent association was pointed out by Virchow, who regards cystic kidney to be due to atresia of the papillæ and the uriniferous canaliculi.

Another theory has been advanced—viz., that the primary change is due to a morbid condition of the renal epithelium, while a third presupposes that a mucoid or colloid degeneration takes place and gives rise to the cysts.

SYMPTOMS.

In discussing the symptomatology of cystic degeneration of the kidney, Dr. W. H. Dickinson states that "the pathognomonic feature of the disease is the double tumour, a sign generally unfound and unsought for, the observer being generally satisfied to regard the case as one of granular kidney." I have inquired into the statistics of recorded cases, and find that in less than one half a tumour has only been found in one side; and this concurs with my own experience, as shown in the above cases of cystic kidney. I have found 105 cases recorded, and of these the malady appears to be almost equally distributed on the right or left sides, so that there seems to be no special predisposition on one side over the other. The statistics also show that it would be rash to conclude that, because the disease is not bilateral, therefore it is not cystic degeneration. In many instances, however, while one kidney has been found to be greatly enlarged, the opposite organ has been involved to a less degree, to an extent not appreciable to the hand during life.

The subjects of cystic degeneration of the kidney have been more often males than females, in the proportion of 60 per cent of the former to 40 per cent of the latter. Of the ages given the average is a little over 49 years, and with one exception the disease has been limited to adults. The symptoms of cystic degeneration of the kidney are essentially those of chronic Bright's disease, the cysts being in the majority of cases the consequence of chronic interstitial nephritis. In cystic kidney, however, dropsy is seldom observed; but hæmaturia was noted in nearly 25 per cent of the cases. The urine was usually pale, copious, and of low specific gravity—in some instances as low as 1005—and may contain tube-casts either finely granular or hyaline. In some instances hæmaturia was very pronounced, so that coagula formed in the bladder, and produced retention, or even suppression, when coagulation had taken place in the pelvis or the ureter.

The general aspect of the patient is probably the most characteristic feature. There is nearly always anæmia, loss of flesh, a sallow appearance of the skin, and marked gastro-intestinal disturbance, as indicated by loss of appetite, sickness, vomiting, constipation, or diarrhœa; the circulation is also frequently impaired in advanced cases, as indicated by cardiac hypertrophy and increased arterial tension. It is extremely difficult to estimate the duration of the disease, as it comes on very insiduously, and does not at first attract the patient's notice or that of his medical attendant, and the symptoms are apt to be attributed to other causes than to renal disease. Cases have, however, been recorded where symptoms have existed for ten, fifteen, or twenty years. The causes of death are not recorded in many of the cases that have been published; but taking those where the immediate cause of death has been stated, coma and convulsions have preceded death in 39 per cent of the cases, while uræmia occurred in 15 per cent, œdema of the lungs in 7 per cent, and cerebral hæmorrhage in 15 per cent. The heart was found to be hypertrophied in 60 per cent of the cases, and the arteries atheromatous in 15 per cent.

The question of diagnosis of cystic degeneration from other forms of enlargement of the kidney has been already alluded to in considering individual cases, especially in Cases III and V. In the first-mentioned the cystic condition of the kidney was complicated by transitory hydronephrosis and some mobility of the organ; while in Case V the cystic disease was associated with intermittent pyuria, caused by a pyelitis.

Leaving out of account such cases as these, and limiting attention to uncomplicated cases, two questions must be carefully considered. Is the swelling due to renal enlargement? and if it is, how are we to distinguish between polycystic kidney and other maladies associated with increased bulk of the kidney?

The general characteristics of a renal swelling, as distinguished from morbid formations in other organs, may be properly considered before we go on to discuss the diagnosis of one form of renal enlargement from another.

The kidney being placed posterior to the peritoneum, when enlargement occurs the serous membrane is dissected from its posterior attachment, and the abdominal contents, being least resistant, are pressed forwards; while the firm structures posterior to the kidney seldom yield so as to cause more than than an indistinct fulness in the loin. Therefore, while the enlarged kidney is in close contact with the posterior abdominal wall, it is separated from the anterior by the abdominal contents. The colon is situated to the front and on the inner side, unless the enlargement is extreme, so as, by dissecting the peritoneum from the anterior abdominal wall, to bring the kidney into contact with it. The small intestine is also in front of the renal swelling, and on percussion the renal dulness is found to be continuous with that of the spine. It may be inferred from what I have just said that these relationships always exist; but, although this is the almost universal rule, there are a few exceptions, which, however, it is not necessary to consider at present.

The swelling is usually rounded in all its margins, and its inner border is lost against the spine. When small it is confined to one side of the abdomen, but if greatly enlarged, although in the first instance its increase is only noticed between the ribs and the crest of the ileum, the growth may cross the middle line, and occupy a considerable part of the opposite side of the abdomen. As may be supposed, the signs of displacement of neighbouring organs will slightly vary according as the disease involves one or other part of the kidney, and also they will depend upon whether or not adhesions have been formed. Sometimes percussion fails to betray the presence of bowel in front of the swelling on account of the intestinal gas having been expelled by pressure; usually in these circumstances careful palpation succeeds in revealing the empty intestine between the renal swelling and the anterior abdominal wall, but if this fails artificial inflation of the colon may be resorted to, not as a routine practice, but only in exceptional cases. In the great majority it is superfluous, and in many inadmissible. But where the diagnosis is incomplete, and it is likely to be made more complete by the injection of air into the intestine, then the method may be employed where the patient's conditions permit of it.

Whether or not the enlarged kidney follows the respiratory movements depends upon the adhesions the organ has formed with surrounding parts. In some instances contraction of the diaphragm may communicate movement to the swelling, but, as a rule, the kidney is immobile both during deep respiration and on palpation. A few cases have been recorded of movable cystic, cancerous, or hydronephrosed kidney.

The most important diseases which require to be distinguished from enlargements of renal origin are ovarian and omental tumours, enlargement of the spleen, tumours of the liver, intestinal accumulations, perityphlitic abscess, and ascites, also malignant disease of the colon.

It is in connection with fluid accumulations that most difficulty has arisen. Hydatid cysts, cysts of the liver and spleen, ovarian cysts, ascites, and perinephritic abscess have been mistaken for renal lesions. The history of the case, as showing the direction of growth, and the relationship of the swelling to the bowel, when considered along with the accompanying symptoms, usually clear up the diagnosis.

In ovarian cysts both loins are resonant, the intestine being almost invariably behind. The bowel is pushed aside so that the growth is in direct contact with the anterior abdominal wall, and is frequently bound to it by adhesions. In a few exceptional cases, however, intestine has been found fixed to the anterior surface of an ovarian cyst, and, on the other hand, occasionally in very large renal accumulations, the intestine gets behind the bulk of the fluid; consequently, the presence of bowel in front does not preclude the possibility of ovarian cyst, nor its absence that of a renal swelling. Excepting these rare cases, the position the bowel occupies in relation to the swelling is the most reliable guide in diagnosis.

In renal lesions the seat of the disease is generally indicated by some urinary disturbance, and in ovarian disease the diagnosis is assisted by the presence of some catamenial pain or irregularity. In renal disease vaginal and rectal examination seldom reveal any change further than depression of the uterus, whereas in ovarian disease the uterus is raised and frequently fixed, and the tumour can be felt in the pelvis. Tumours of the ovary usually make their appearance in the lower part of the abdomen, a little to one side of the middle line, but when increased in bulk they may occupy the whole of the anterior portion of the abdomen. They are, as a rule, movable, and frequently multilocular, in these respects differing from the large renal accumulations of fluid, which are fixed, and generally unilocular.

Ascites, unless when it is limited, may be easily diagnosed from renal swelling. When general, the swelling is symmetrical, and the percussion in both flanks dull—the distribution of dulness varies with position—characteristics which distinguish a collection of serous fluid within the peritoneum from an accumulation of pus or urine in the kidney. Supposing, however, the ascites is limited, the signs mentioned may not be present, and there may be considerable difficulty in distinguishing by a physical examination the two conditions. But while in such cases, the signs during life were equivocal, the concomitant symptoms clearly indicated the nature of the disease.

Perinephritic abscess is not apt to be mistaken for organic disease of the kidney unless the two conditions co-exist. Abscess external to the kidney causes a more diffuse swelling, and more lumbar bulging than renal growths; and fluctuation is more superficial. The local surface temperature is raised, and superficial œdema is more marked in the former than in the latter.

In hepatic cysts and solid tumours of the liver, the new formation lies in contact with the abdominal wall, very rarely is bowel interposed; consequently, the liver and the tumour dulness are continuous. These growths increase in size from above downwards, and are nearly always associated with symptoms of hepatic disturbance. Cysts arising from the posterior margin or the concavity of the liver may be very difficult of diagnosis.

Splenic growths are easily distinguished from renal by the fact that the intestine is not in front of them, and generally the sharp and well-defined edge and the notch of the spleen can be felt. The splenic growth is recognised by being movable, especially upwards; by having, unless the organ is greatly enlarged, an area of clear percussion between it and the spine; by seldom causing pressure upon veins, and producing varicocele; by the other symptoms that accompany splenic enlargements—for example, leukæmia, amyloid disease, anæmia, &c.

Tumours or abscess connected with the lumbar or mesenteric lymphatic glands are sometimes very difficult to define. They are, however, usually symmetrical, are not complicated by urinary disturbance, but are associated with symptoms of intestinal disease, with glandular enlargements elsewhere, or evidence of tubercular disease in other organs.

Fæcal accumulations, fæcal and perityphlitic abscess, are not likely to be mistaken for renal swelling if the symptoms are carefully considered along with the physical signs.

The diagnosis of polycystic kidney from other maladies associated with increased bulk of the kidney may now be discussed.

Increase in the bulk of the kidney is the most important indication of this disease. There is a non-fluctuant swelling in one or both loins; the swelling is usually rounded and nodulated on the surface, not necessarily painful on pressure, slow of growth, does not diminish or increase from time to time, nor is there sudden retention of the renal excretion. But while the augmentation in size may be very great, it is worthy of remark that the organ almost always retains its renal form, however much it may be enlarged. This is an important point in distinguishing cystic diseases from other forms of enlargement of the kidney. The renal diseases most likely to be confused with cystic degeneration are hydronephrosis, pyonephrosis, hydatids, abscess, or tubercular disease of the kidney, and simple or malignant neoplasms. The absence of fluctuation at once eliminates hydronephrosis and pyonephrosis, while to the diagnosis of hydatids of the kidney attention shall presently be directed. In abscess and tubercular disease of the kidney the course of the malady is acute and associated with more or less increase in the size of the organ, and in these diseases the renal form of the swelling is seldom maintained; again, in abscess and tubercular disease there is generally marked elevation of temperature, some pyuria is usually detected, and the swelling in the lumbar region is more marked behind than in cystic disease. Malignant neoplasms of the kidney, when the growth has attained considerable size, is generally associated with severe pain and persistent hæmaturia, which comes on independently of any direct exciting cause, and may occur at all times whether the patient is moving about or at rest, and when the hæmorrhage commences it is more profuse and more continuous than what is seen in cystic degeneration. Profuse hæmaturia in young children, if repeated and associated with renal enlargement, is very suggestive of malignant disease. Again, in malignant tumours of the kidney the swelling does not maintain the renal form. The disease is rarely found to occupy both sides, and pain is not limited to the lumbar region of the affected side, but generally extends to the chest, across the middle line, or to the hips and lower extremities. Again, in malignant disease the increase in bulk is rapid, and when large in size is often associated with marked distension of the superficial veins of the abdominal wall, a condition I have never seen in cystic kidney.

From what has been said regarding the characteristics of polycystic disease of the kidney, it will be seen that in all essentials it is a slowly degenerative process resembling in its incidents granular disease of the kidney, and, as in the latter affection, its causes are difficult to determine, and the onset is obscure. The disease usually remains latent as far as symptoms are concerned until an advanced stage is reached. The first thing to attract the patient's attention is the increase in the bulk of the organ.

Attention may now be asked to the symptoms other than those caused by the increase of the bulk of the organ which distinguishes polycystic kidney from granular kidney. The absence of dropsy is one of the most marked characteristics of the disease, as distinguished from chronic renal cirrhosis. In none of my cases, even the most advanced, was œdema present, although in one (Case IV) serous fluid was found in the peritoneum. Dickenson says—"Dropsy, whether superficial or in the serous cavities, appears to be generally absent. A patient under my own care was said to have swelling of the legs; when I saw him there was none. The only recorded case I have met with in which œdema was mentioned, presumably as a result of this disease, was that of the gigantic cystic kidney recorded by Dr. Hare. In this it is probable that the swelling was due more to the mechanical fact of the tumour than to the constitutional influence of the disease. The œdema was most marked on the side to which the renal swelling was nearly limited."

DEC 13 1898

The urine in large polycystic kidney varies according to the stage of the disease. It may have the characteristics belonging to chronic Bright's disease, or the secretion may be strictly normal. Of the one hundred and five cases recorded, in only 40 per cent the urine contained albumen, and in most instances the quantity present was small. The urine is described as copious in amount, pale in colour, and of low specific gravity, 1005 to 1010.

While in the early stages of the disease urinary symptoms are generally absent, as a rule as the disease advances the urine has been found to contain albumen and finely or coarsely granular tube-casts. Hæmaturia was noted in a fourth of the recorded cases. Sometimes it was profuse, in other instances small in amount; the fact just stated differs from what is observed by Dickenson, who says—"It is characterised in most cases by the frequent admixture of blood, often so copious as to call for styptics. Of sixteen cases in which symptoms were present hæmaturia was prominent in eleven; in some it largely contributed to death by the exhaustion it caused; in others, it gave trouble from the formation of coagula." In only one of my cases (Case IV) was hæmaturia present. In this case the urine was never free from blood. The persistent and sometimes considerable hæmorrhages led me for some time to suspect malignant tumour of the left kidney. The character of the hæmorrhage, and the circumstance that it was associated with a swelling which was steadily increasing, supported this view; while on the other hand, that subsequently the right kidney became enlarged, and was also painful—taken in conjunction with the discovery that the hæmorrhage was from the right kidney only, and that there was evidence of chronic tubular nephritis—these facts made me doubt the accuracy of my first diagnosis of malignant tumour, and incline me towards that of cystic degeneration. The presence of hypertrophy of the left ventricle and increased arterial tension supported this view.

(*To be continued.*)

Obituary.

PROFESSOR M. CHARTERIS.

We regret to announce the death of Professor Charteris, of Glasgow University, which took place on Monday, 7th June, 1897, at Comrie, Perthshire. At the close of the winter session he was, it may be recollected, suffering severely from the after-effects of influenza, and was obliged to ask leave from the University Court for the summer session. His eyes had been seriously affected by the ailment, and it was felt that complete rest, if only on that account, was necessary. On the advice of his medical attendants he went to Comrie, where, it was hoped, the bracing air would restore him to health, but from the first there was little or no progress, though at no time was the condition of the patient considered critical. On Sunday morning, however, the illness took a decidedly serious turn, and on the following day Professor Macewen was summoned from Glasgow. He reached Comrie too late to be of any service, as Professor Charteris died very shortly after his arrival. The deceased gentleman was born in 1840 at Wamphray, Dumfriesshire, and was educated at Wamphray School, proceeding afterwards to Edinburgh University, where, always a diligent student of Latin, he was distinguished for Latin verse. He studied medicine in the thorough spirit which was characteristic of him, and graduated M.D. in 1863, subsequently taking classes abroad. After fulfilling the duties of his profession for a considerable time in London he took up practice at Airdrie, coming sometime later from that purely industrial district to Glasgow, where he quickly acquired a large connection. An appointment as physician to the Royal Infirmary followed, and in 1876 he was elected Professor of Practice of Medicine in Anderson's College. Four years later he was promoted to the Chair of Materia Medica and Therapeutics in the University of Glasgow. He was one of the most successful teachers in the medical faculty, and was very popular with the students. His literary work was well known in the profession, and his "Practice of Medicine" is now in its seventh edition. He was the author of the "Treatment of Disease by Climate" in *Quain's Dictionary of Medicine*, and he wrote a handbook on home and foreign health resorts. The results of his original researches in salicylic acid and chlorobrom have been of the greatest benefit in practice. A few months ago he was elected a Fellow of the Royal Society of Edinburgh. For many years Dr. Charteris held an official appointment under the Factory Acts, and in this capacity was well known and highly esteemed. He leaves a widow and three sons.

DR. WILLIAM GARDNER.

DR. WILLIAM GARDNER, who for many years was recognised as the leading surgeon in Adelaide, and who occupied a very distinguished position as a surgeon in Melbourne, died suddenly of paralysis at Naples on 8th April. Dr. Gardner graduated at Glasgow in 1874, and took his M.D. degree in 1876. At the recent Intercolonial Medical Congress held in Sydney Dr. Gardner was the President of the Surgical Section; he also, in conjunction with Dr. D. Grant, founded the *Intercolonial Medical Journal*, and he has left a permanent name in the history of Australian surgery by his advocacy of certain operations in connection with the treatment of hydatids. Dr. Gardner had been paying a visit to Europe for the benefit of his health, and was on his way back when he succumbed. He was kind and genial, and his untimely end at an early age will be deeply regrettd by all who knew him.—(*British Medical Journal*, 22nd May, 1897.)

CURRENT TOPICS.

The Public Health (Scotland) Bill.—With regard to the modification of Clause 22 of this Bill, which would have the effect of placing the sanitary inspector on an equality with the medical officer of health in deciding as to what constitutes a danger to public health, we have received the following excerpt from minute of University Court of the University of Glasgow, of 17th June, 1897:—

"The Court had under consideration the following report which was adopted by the General Medical Council at their recent sitting, with a resolution that a copy should be forwarded to the Secretary of Scotland and the Lord Advocate.

"1. The attention of the General Medical Council having been called to a proposed modification of Clause 22 of the Public Health (Scotland) Bill, they cannot do otherwise than view with grave apprehension the proposal to place the opinion of the sanitary inspector, in matters where a judgment has to be formed as to what is or is not liable to constitute a danger to public health, on a statutory equality with that of the medical officer of health.

"2. The General Medical Council would recall the fact that the legislature have from time to time extended, by statutory enactment, the requirement that medical officers of health should before their appointment give definite evidence of the possession of special acquirements fitting them for their public duties, and that the General Medical Council have spent much time and expense in requiring and maintaining at a high standard a scheme of education and examination that shall give effect to the intentions of the legislature.

"3. And the General Medical Council feel convinced that if the opinion of officers, altogether without the requisite technical and profession training, is to be placed on a similar footing to that of medical officers of health, the efforts of the Council to ensure the requisite efficiency in the public health service will be frustrated.

"R. Thorne Thorne, *Chairman.*"

"*27th May, 1897.*—The Court resolved to approve of the action of the General Medical Council in this matter, and that copies of this resolution should be forwarded to the Secretary of Scotland, the Lord Advocate, Lord Rector of the University, the Member of Parliament for the University, the Members of

Parliament for the various divisions of Glasgow, and Partick, Govan, and West Renfrewshire."

We entirely approve of the action of the General Medical Council and of the Glasgow University Court in this matter.

British Medical Association—Glasgow and West of Scotland Branch.—On Wednesday, 16th June, the Glasgow and West of Scotland Branch of the British Medical Association, with the Southern Medical Society and the Eastern Medical Society of Glasgow, held a joint meeting at Tarbet, Loch Lomond. Dinner was served in Tarbet Hotel, Dr. Maclachlan, Dumbarton, in the chair. Despite the exceedingly bad weather there was a large attendance of medical men from Glasgow and the West of Scotland, and the meeting was one of the most successful of recent years.

At a business meeting held in Tarbet Hotel, the following resolutions were unanimously adopted:—(*a*) "That the Council of the British Medical Association be requested to memorialise the General Medical Council on the urgent necessity for taking steps to prevent the growing evils of Medical Aid Associations and Medical Institutes." (*b*) "That this meeting is of opinion that the powers proposed to be granted to sanitary inspectors in Clauses 22 and 33 of the Public Health (Scotland) Bill, whereby they are to be made competent, equally with medical officers of health, to certify in respect of danger or injury to health, are contrary to the spirit of the Medical Acts, and are calculated to act prejudicially with regard to the efficient administration of the Public Health Acts."

Medical Appointments.—Dr. Walter K. Hunter has been promoted to the office of Assistant Physician to the Glasgow Royal Infirmary in room of Dr. Charles Workman resigned; and Mr. Wm. J. M. Slowan has been elected an extra Dispensary Surgeon in room of Mr. Kent resigned.

Dr. Jas. H. Nicoll has been appointed Consulting Surgeon to the Glasgow Ear Hospital.

At the Universal Food and Cookery Exhibition, held at Niagara Hall, London, under the patronage of H.R.H. The Duke of Connaught, H.R.H. The Princess Louise, and other distinguished ladies and noblemen, and which closed on Wednesday, 19th May, the Prix d'Honneur was awarded to Van Houten's Cocoa for purity, strength, flavour, and digestibility—in addition to true economy in use.—(*Communicated.*)

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1896-97.

MEETING XII.—2ND APRIL, 1897.

MR. H. E. CLARK *in the Chair.*

I.—CASE OF EXCISION OF ANKLE PERFORMED THREE YEARS AGO.

BY DR. EDINGTON.

W. S., æt. $3\frac{4}{12}$ years, was admitted to the Royal Hospital for Sick Children in January, 1894, during my term of office as house surgeon there. He had a swelling of left ankle, of four weeks' duration, but his friends stated that ever since he had begun to walk he had suffered from weakness in left foot.

On examining the parts there was a rough resemblance to rickety deformity, but on more minute inspection a swelling, more or less elastic, and evidently caused by some synovial mischief in the ankle-joint was found, in addition to enlarged bony extremities. The cautery was applied a fortnight after admission, but in April the swelling, having become fluctuant, was incised, and tuberculous matter evacuated. Some disease was found in the astragalus near the head, and the affected part of this bone was scraped. The case did not show any signs of improvement, and one month later I decided to perform excision of the joint.[1] This was done by a transverse incision stretching across front of ankle from malleolus to malleolus. Before dividing the extensor tendons they were looped up by a long ligature. The astragalus was removed entirely, and the joint found to be lined by a wall of tuberculous granulation tissue. This was cut away with scissors, and scraped with Volkmann's spoon. The calcaneo-astragalar synovial membrane was also diseased, and as the calcaneum was not indubitably sound, its cancellous tissue was entirely scooped out. A slice was taken off the lower end of leg bones, and the tibio-fibular articulation scraped, as also the cancellous bone in lower end of tibia. The cavity of the os calcis was packed with iodoform and boracic acid (1 to 3), some gauze stuffing placed between leg bones and tarsus, and tendons and skin sutured separately.

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[1] By kind permission of Dr. Fleming.

The wound gave some trouble, the skin became irritated, and the stitches cut out, the wound healing by granulation. He was dismissed with foot in plaster at end of two months. One month later the plaster was removed, and he was able to limp along wonderfully well. It was observed that there was considerable softness about the sole under the calcaneum.

In July of 1895, he was readmitted to the hospital under the care of Mr. Parry. A small sinus at inner end of the cicatrix was injected with iodoform and glycerine, and he was dismissed with the part in plaster.

He was readmitted in October, 1895, when Mr. Parry scraped out a tuberculous focus in lower end of tibia, removing a slice from the lower end of shaft.

He was dismissed to Convalescent Home in January, 1896, when it was noted that, although he walked with ease, his toes were "dropped."

Present Condition.—With his boots on it is impossible to tell which is the affected limb. On examining the parts after removal of clothing, it is found that the foot is displaced outwards from axis of leg, so that while the sole meets the ground in normal fashion, the lower end of tibia projects inwards to extent of about half an inch. The cicatrices have healed soundly. There is no ankylosis of joint, and he has a certain amount of power over foot with his long extensor muscles, although his performance of dorsiflexion is not very brilliant. He has never been strong, being of nervous temperament, but he plays about the streets with other boys. A tracing of feet shows shortening on affected side of half an inch.

Pathological Examination.—Astragalus presented marks of former scraping. Interior of bone very fatty.

II.—CASE OF EXCISION OF WHOLE OF TARSUS, SAVE A PORTION OF OS CALCIS, ELEVEN MONTHS AFTER OPERATION.

By Dr. Edington.

W. C., æt. 8 years, came to Central Dispensary in January, 1896, with disease of tarsus on left side. He had been struck on the ankle with a brick four years previously, and this had been followed by swelling. There was subsequently a "gathering" which "broke." He underwent operative treatment in one of the infirmaries on several occasions, but the trouble always returned after more or less interval.

The condition of affairs, when I saw him at the Dispensary, was as follows:—On inner aspect of left foot was a sloughy undermined ulcer over the head of the astragalus, and above this, the cicatrix from a former operation. Above and in front of ulcer was a small scab. The dorsum of the foot was the seat of a smooth swelling, suggestive of disease of tarsal joints with possible implication of tendon sheaths, and there was decided tendency to "dropping" of the foot. Leg muscles were markedly atrophied, and the malleoli in consequence stood out very prominently. No appearance of implication of ankle-joint. General condition not good, delicate-looking, and flushed cheeks.

He was kept under observation for a fortnight, when the discharge from the ulcer was found to be pretty profuse, and on 1st February he was put under chloroform and the ulcer scraped. The diseased tissue extended forwards under the skin to first metatarsal base, and also downwards into the sole. The wound was stuffed with gauze. His progress was satisfactory, but was interrupted by a feverish attack with vomiting a fortnight after the operation. After administration of castor-oil he was quickly well of this. The wound was closing well, but in March the swelling over dorsum increased, the skin became reddened, and an acute abscess was opened in front of ankle-joint, and apparently in connection with that joint and extensor tendon sheaths. The condition of affairs did not improve, and I determined to open the parts up freely.

On 2nd May, 1896, Dr. E. Arthur Gibson administered chloroform, and a transverse incision was made from tip of external malleolus across front of ankle to sinus below, and in front of internal malleolus. The soft parts were reflected upwards and downwards, and the astragalus was found to have its head buried in tuberculous granulation tissue (synovial), which also partly obscured the scaphoid. These two bones were removed together, when tuberculous changes were observed in neighbourhood of calcaneo-astragalar interosseous ligament. The cuboid and cuneiform bones were next removed, along with base of second metatarsal bone. A horizontal slice was taken off anterior part of os calcis, so as to get rid of diseased interosseous groove, when the cancellous tissue showed a small yellow spot surrounded by a congested zone. The whole interior of the os calcis was therefore cleared out. The ankle-joint was unaffected, as were the tendon sheaths, but under these was a mass of tuberculous tissue on dorsum of scaphoid. Os calcis packed with crystallised iodoform; cavity between remaining bones stuffed with gauze, and wound was sutured closely, save where gauze projected at either end. The cut tendons and nerves were left ununited. In a few days the lower lip of wound became gangrenous and stitches were removed, and the cavity treated as an open wound and allowed to granulate. The articular surfaces of tibia and fibula, and posterior astragalar facet of calcaneum remained free from granulations for three and a half weeks, at end of which time buds made their appearance through the cartilage.

Five months after the operation the cavity had closed, but both upper and lower skin edges had curled in, forming a furrow separating lower end of leg-bones from dorsum of foot for about a quarter of an inch backwards. Thus, not even cicatricial continuity of long extensor tendons could be obtained, and the toes were extended by the extensor brevis alone, while the opposing surfaces of the furrow were excoriated by the constant movement of one upon the other.

He was again put under chloroform (14th October, 1896), and two parallel incisions down to the bone were carried down vertically from leg to dorsum of foot. The ribbon of skin (about an inch broad) and cicatricial tissue between them was then raised from the subjacent bones. The incisions were sutured closely. It was hoped that by fresh granulations forming, the extensor tendons and tibialis anticus might regain some purchase on the foot; and the desired end was attained to a slight degree.

Up to the present (2nd April) he has been forbidden to walk,[1] but testing him at the Dispensary has given satisfactory results. These may be summarised:—

1. The foot is shorter than its neighbour by 1¾ inch. It is also half an inch less in breadth across heads of metatarsals.
2. Metatarsus freely movable on os calcis.
3. Calcaneum freely movable on leg-bones.
4. Power of dorsiflexion is sufficient to keep the toes from knocking on the ground.
5. He walks chiefly on os calcis, and on fifth metatarsal in its whole length; the remaining metatarsals bear less of the weight, and the first is altogether off the ground. He walks with a hardly perceptible limp, and leg-bones are seen to pass down between os calcis and metatarsus when weight is brought on them, while they rise when the weight is removed, thus showing that a certain amount of spring is still present in the foot.

Pathological examination of bones removed from this case was made by Dr. A. R. Ferguson, with the following result:—"Tuberculous cavities in cuboid, internal and external cuneiforms; foci of disease in middle cuneiform; astragalus and scaphoid soft and friable; extensive affection of synovial membranes."

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[1] Since the above was written patient has been using the part freely, and without bad result (12th June, 1896).

Note.—In both cases, sensation in dorsum of foot is perfect.

Dr. Renton expressed his entire sympathy with Dr. Edington's procedure in dealing with these two cases. He believed that it was sound practice to prefer conservative efforts rather than amputation in cases of tuberculous disease of the bones of the foot in children.

Mr. H. E. Clark was not disposed to dissent from the view in favour of partial operation rather than amputation, though such practice might well, he considered, be carried too far. The difficulty of completely eradicating all tuberculous foci was often great, and when repeated operations were necessary it became a question whether it was worth while to subject the child to a continued risk and to more prolonged convalescence, when amputation would promptly and certainly remove the whole of the disease, and the patient could be provided with a serviceable foot by the instrument-maker. He recognised the sentimental objection to amputation, and admitted that this should not be neglected in the discussion of the question.

III.—ABDOMINAL SECTION FOR RUPTURED GASTRIC ULCER.

By Dr. Renton and Dr. Snodgrass.

Dr. Renton read notes of a case which he had seen with Dr. Snodgrass. The patient was seized with pain in the abdomen accompanied by collapse. On nearing the bed one could hear the heart causing a splashing sound, and on listening over the upper abdominal region with the stethoscope the splashing was very distinct. She complained of pain on each side of the neck, and looked ill. The abdomen was not much distended, and the area of liver dulness was not diminished. She suffered from mitral disease, and was very anæmic.

Dr. Renton advised that the abdomen should be opened. The operation discovered no evidence of rupture of the stomach or of any other organ, so the abdomen was closed. The splashing sound continued, and a fine needle was passed through a lower rib interspace, but no fluid was obtained. The patient died, and Dr. R. M. Buchanan, who made the *post-mortem*, found that the upper end of a dilated stomach was closely adherent to the diaphragm and formed a cavity into which an ulcer had given way. This clearly showed the cause of the symptoms and the very doubtful possibility of dealing with such a condition.

IV.—ABDOMINAL SECTION FOR RUPTURED GASTRIC ULCER.

By Dr. Renton and Dr. Adamson.

Dr. Adamson and Dr. Renton read notes of a case of abdominal section for ruptured gastric ulcer, and showed the patient, who is now quite well.

In this case Dr. Adamson saw the patient at 9 P.M., and found her suffering from intense pain in the abdomen, with a board-like feeling over it, slight superficial gurgling, intense pain in the neck on both sides, and a previous history of stomach trouble. In these circumstances he advised her removal to the Western Infirmary, where, in Prof. Buchanan's absence, Dr. Renton, assisted by Dr. B. Buchanan and Dr. Carslaw, opened the abdomen and found a ruptured gastric ulcer on the anterior wall; this he pared and stitched, and washed out the abdominal cavity. The patient made a good recovery.

Dr. Renton spoke strongly on the great importance of the operation being performed as soon as possible after the rupture.

Dr. Adamson drew attention to the symptoms of ruptured gastric ulcer, and explained some of the reasons for these symptoms, more particularly with regard to pain in the neck.

V.—NOTES OF SURGICAL CASES.

By Dr. Nicoll.

Specimens from two cases of Paget's disease.

Case I.—Miss C., æt. 60, sent to me by Dr. J. D. Smith on 3rd March. I removed the left mamma (the specimen), along with a number of cancerous glands from the axilla. The specimen is shown for two reasons.

1. The usual difficulty in the diagnosis of Paget's disease is that of distinguishing it from ordinary eczema. This case presents all the distinctive points—(*a*) The patient, a woman who was not suckling, had never suckled, and therefore "had no business to have" eczema of the nipple or mamma. (*b*) The chronicity of the disease. It has existed for eight years, and no treatment had in any way benefited it. (*c*) The edge of the diseased area of skin, as shown in the specimen, is sharp-cut

and abrupt—not the more or less diffuse margin of an eczema. (*d*) The surface of the diseased area, 8 inches by 6 inches, is distinctly eroded in parts, and presented before removal the intensely raw-red appearance so characteristic of the disease. (*e*) The ultimate development of carcinoma in this case in the form of a hard mass under the areola and nipple, which latter has disappeared by ulceration, and of cancerous axillary glands.

2. The specimen has been preserved in formalin, which has of late been employed largely for preserving tissues, in the hope of retaining their natural colour. The actual method employed in this specimen was the following (for which I am indebted to Dr. Jenkins, who had noted it in a German journal as one of the latest modes of employing formalin):—(*a*) Immersion for forty-eight hours (in the dark) in formalin, 250 parts; potass. acetat., 30 parts; potass. nitrat., 10 parts; water, 1,000 parts. (*b*) Transfer for forty-eight hours to alcohol (95 per cent), also in the dark. (*c*) Preserve in glycerine, 500 parts; alcohol, 100; potass. acetat., 30 parts; water, 1,500.

The effect has been to preserve the colour of the specimen fairly well, and, in all probability, the result will in time improve. Solution No. 2 bleached the specimen very markedly, and it has regained already to a considerable degree its original colour in solution No. 3.

Case II.—Mrs. C., æt. 62, sent to me by Dr. Hope in July, 1895. I removed the left mamma along with some cancerous glands from the axilla. This specimen shows an area of Paget's disease around the nipple of 3 inches by 3½ inches. The nipple, areola, and breast have been bisected, and the opposed cut surfaces show very well the extension of the disease down the ducts to the hard mass of cancer immediately under the nipple.

Both of these patients are at the present time well.

Case of strangulated interstitial inguinal hernia.

Mr. M., æt. 20, was seen by Dr. John Aitken on 8th March, and found by him to be suffering from a large strangulated right inguinal hernia. The symptoms of acute strangulation had existed for nearly twenty-fours hours. There was no history of any previous hernial swelling in the scrotum, but there had always been a small swelling in the region of the right inguinal canal, and there had never been a testicle in the right side of the scrotum.

Dr. Aitken administered chloroform, and reduced the hernia. The pain and vomiting ceased, and the patient next day returned to business. During the night of 10th March the hernia again descended, and early on the morning of the 11th Dr. Aitken was again summoned, and found the patient's condition much the same as on his visit to him on 8th March. For the second time Dr. Aitken gave chloroform and reduced the hernia. All of it passed through the external ring, but Dr. Aitken missed the "gurgling slip" of successful reduction, and then observed that a large ovoid swelling of the abdominal wall had developed in the iliac, lumbar, and hypogastric regions. Further, the patient's pain and vomiting continued. Some hours later I saw him at Dr. Aitken's request. The condition was as described, but we were both discouraged to find considerable emphysematous crackling on palpation over the swelling.

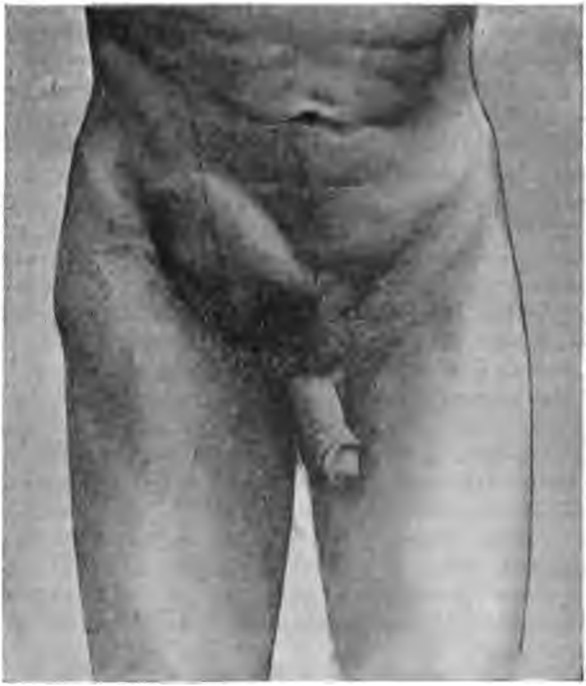

Plate (reduced) from Macready's "Treatise on Ruptures."

"Interstitial Hernia. The right half of the scrotum is absent, and the testis, which is very small, lies within the canal near the external ring. The external oblique is in front of the hernia. From a man, æt. 60."

The curved line represents approximately the dimensions of the hernia in the case of Dr. Aitken's patient, and the straight line the position of the incision made in operating.

I operated, cut through the skin and subcutaneous tissue, finding no emphysema, then through the external oblique. Between the external oblique and the internal oblique lay a large coil of small intestine tightly strangulated at the internal inguinal ring, through which it had emerged. The gut was very dark, but otherwise healthy. There was no sac discoverable. The cellular tissue between the two muscles in which the gut lay was distended by emphysema. I enlarged the internal inguinal ring and returned the intestine. I then removed an atrophied undescended testicle occupying the inguinal canal between the internal and external rings. This I have here. I then closed the internal ring, the wound in the external oblique, and, finally, the skin wound, all with gut sutures. The patient made a perfect recovery.

The case is brought forward to-night for two reasons—(1) It is in itself not a very common one; (2) there was a symptom not very easy to explain—surgical emphysema with apparently nothing to account for it.

The accompanying plate which I have taken from Macready's beautiful series of plates in his *Treatise on Ruptures*. Except that in this case of Dr. Aitken's the man's age was 20, the hernia strangulated, and its size greater, the description of Macready's plate exactly conveys its features. What had happened on the occasion of the second reduction by Dr. Aitken was that the intestine, being expelled from the scrotum, had passed upwards through the external ring, had entered the space in the inguinal canal long occupied by the undescended testicle, had met this testicle and, failing to pass it and so reach the internal ring, had travelled up in the abdominal parietes separating the external and internal oblique muscles.

Vermiform appendix removed along with the walls of an abscess cavity which enclosed it.

Mr. M., æt. 40, four weeks ago called in Dr. Kennedy, who diagnosed appendicitis. There had been for a week previously some pain in the right iliac region, which had become severe the day Dr. Kennedy saw him. The following day I saw him in consultation with Dr. Kennedy, and we had him without delay conveyed to the M'Alpin Nursing Home in an ambulance. When admitted his temperature was 101°, and the right iliac region so tender that accurate examination was not easy. Repeated enemata were given, and the patient put on milk diet. In three days the temperature was normal, and the patient felt so well that it was difficult to persuade him that an operation was necessary. At this time there could be felt a hardish area in the position of the appendix, and apparently of the size of a hen's egg.

A week after I first saw him I operated and removed what I have here—a thick-walled appendix with a perforation near its free border—and the walls of an abscess cavity which contained it, and some thin pus, the quantity of which could not be accurately measured, possibly about 3 drs. The patient has made an uninterrupted recovery.

The case has two interesting aspects—(1) It is always difficult to decide in a given case of subacute or relapsing appendicitis whether to operate or wait in the hope of there being no further trouble. In this case the temptation to wait was strong, the temperature had been normal for nearly five days, there had been no pain for the same period, on palpation there was but slight tenderness, and there remained but a small area of induration; and yet, on operating, this area is found to be an abscess cavity containing a perforated appendix. (2) When operations on perforative appendicitis were first becoming common a bold policy was pursued and advocated. Of late there has been a decided tendency to read the teaching of fuller experience as indicating more cautious procedure in operating, and most surgeons now are very careful not to disturb the abscess walls, where such fortunately exist, but to exacuate the contents, trusting to the undisturbed walls to prevent contamination of the general peritoneal cavity. In the present case this was impossible, and the bolder course had to be pursued. The abscess walls had no connection with the anterior abdominal wall and, therefore, extra-peritoneal evacuation of the abscess was impossible. The walls consist entirely of omentum and adhesions on the cæcum and appendix.

Encysted vesical calculus.

This is a uric acid calculus weighing 280 grs. The patient, a healthy young man, came into my hands five months ago. I decided to crush the stone. I found, however, that on grasping it with the lithotrite I could not separate it from the bladder wall. I therefore performed suprapubic cystotomy, found the stone encysted in a shallow pouch in the base of the bladder, and removed it. I sutured the bladder, which healed by first intention.

There is in Scotland still considerable difference of opinion as to the relative merits of lithotomy and litholapaxy. But reference to recent surgical literature clearly shows that, in the opinion of those best qualified to judge, lithotomy is being relegated to the catalogue of operations now seldom performed. It would be easy to multiply quotations in proof of this; I give one only. Mr. Henry Morris, in Treves' recently published *System of Surgery*, writes of the treatment of vesical calculus —"Litholapaxy, as introduced by Bigelow and modified by Sir Henry Thompson and Guyon, is now the recognised operation for all cases (with few exceptions to be named presently) of vesical calculus in males." Statements more or less precisely similar will be found in nearly all the recently published surgical text-books—in the last edition of *Erichsen*, in *Moullin's Surgery*, *Keen and White's American Surgery*, and, indeed, in the whole field of recent surgical literature with few exceptions.

It is the case that several of our leading Scottish surgeons defend their continued preference for lithotomy on the ground that cases of stone are so comparatively infrequent in Scotland that it is impossible for a man to obtain sufficient practice in lithotrity to warrant his performing it in preference to lithotomy. My comparatively limited experience forbids me offering a very decided opinion. I therefore merely submit, in connection with the showing of this calculus, a statement of fact. During the past five and a half years I have operated on seventeen cases of stone in the bladder. I have had no death. Of the seventeen, fifteen were operated on by litholapaxy and two by lithotomy (suprapubic). Of these two, one is the case presented to-night. The other was the case of an old man operated on in the M'Alpin Home four and a half years ago, where Dr. Ritchie Thomson assisted me. His was a case of softish uric acid and phosphatic stone behind a much enlarged prostate, and after removing the stone I found his ureters so dilated from back-pressure that I was able to pass my forefinger into each.

At a meeting of this Society in November, 1893, I showed the *débris* of a stone (uric acid and phosphate), weighing 357 grs., which I had successfully crushed under cocaine.

REVIEWS.

The Surgery of the Chest. By STEPHEN PAGET, M.A. Oxon., F.R.C.S. Bristol: John Wright & Co. 1896.

THIS work should have been noticed in these pages nearly a year ago, as it was published in June, 1896; but the reviewer has found it so crammed with interesting and important material that he has been led on to a complete study of it. Consisting as it does of nearly five hundred pages of close print, it has occupied the spare half-hours of many months in its perusal. We regard it as one of the most important works on surgery published in recent years in this country. Mr. Paget has himself had an unusually wide experience of the surgery of the chest, and he has sought with untiring industry in the medical literature of many countries for illustrations of the various surgical conditions he describes.

In discussing the complications of fracture of the ribs, the author devotes a chapter to the study of surgical emphysema. We are a little astonished to find him saying, "In simple fractures I have very seldom seen it, and have never seen trouble come of it," for our experience in the Glasgow hospitals does not bear out so optimistic a position. With us it occurs in about one case out of every ten of simple fracture of the ribs, and we have many examples of its leading to a fatal result. Some allowance must, of course, be made for the fact that only the graver cases of fractured ribs reach us, the milder ones being treated outside the hospital wards.

The chapter on wounds of the heart is one of the most interesting of the book, and contains marvels of recovery and astounding operations, such as would not be out of place in a story by Jules Verne. One fact is substantiated beyond cavil, namely, that wounds of the heart are not necessarily fatal, and that the most serious danger to be apprehended from such wounds is the hæmorrhage into the pericardial sac and consequent impediment to the heart's action. Some years ago there was shown at one of the Glasgow Medical Societies by Dr. James Dunlop, the heart of a man who had been wounded by a revolver bullet. The bullet had traversed the lung and entered the wall of the left ventricle where it had become imbedded, and the wound had healed over it; the man had lived some days and finally sucumbed (we believe) to septic pneumonia caused by the bullet track. Mr. Paget does not seem to have heard of this case, and may possibly be glad to be furnished with some particulars of it. The most interesting group of cases given by Paget of removal of needles from the heart, serve to show that the chief danger of such injuries lies in the impediment caused to the heart's action; when, therefore, needles are pushed far enough in to be free from contact with the parietal pericardium they seem to be much less dangerous. Selzner's case is most graphically described, and it says much for the endurance of his patient that in spite of "a plug of gauze escaping into the pleura, so that it could not be found again," and also of the fact that "the heart beat so hard that the needle slipped back and vanished into the interior of the ventricle, and lay upright inside it," the patient "left the hospital four weeks after the operation, in perfect health, with no signs of trouble either in the heart or lungs."

We naturally turn with interest to the subject of empyæma, and find it treated with much fulness and in a thoroughly judicial and satisfactory manner. The comparative infrequency of tubercle as a cause of empyæma is well brought out by the statistics cited—thus, König reported 80 per cent of his cases as non-tuberculous; Moutard-Martin had only 7 tuberculous cases in 84 cases of empyæma; and Leudet in 826 *post-mortems* of cases of phthisis found empyæma present in only 9 instances. Mr. Paget endorses Schede's opinion that in all cases of empyæma, if operated on early, there is not only the possibility but the certainty of a considerable expansion of the lung, and that in children this may even go so far as to the complete restoration of the shape of the chest and the functions of the lung! He would therefore reserve extensive rib-resections for chronic cases where milder measures have failed, and he thinks that if proper treatment be adopted at an early stage of the condition, such heroic measures should be unnecessary. He strongly disapproves of forcible irrigation and the use of strong antiseptic solutions, holding that the introduction even of warm aseptic water is not without its dangers, and that the pleura very readily absorbs such chemicals as carbolic acid and corrosive sublimate. We have ourselves arrived at much the same conclusions, but have not discarded irrigation entirely, for many empyæmas are so thoroughly septic that something more than evacuation of the pus is necessary if we would minimise the risk of septic absorption. But we have for a long time past done away with the irrigation at each dressing subsequent to the operation, and have had every reason to be satisfied with our results. Mr. Paget mentions J. H. Lilly's case, where the patient was cured after fifty-six aspiration punctures, only for the purpose of "pointing the moral" as to the uselessness and stupidity of such treatment; but the fact remains that the patient is still alive (is driving a cab, indeed, in Glasgow), is in robust health, and has as perfect a lung on that side of his chest as on the other. Indeed, after a prolonged and wide experience of the treatment of empyæma, we are still able to point to it as the most successful cure of that condition with which we are acquainted.

We are sorry that the limits of space prevent our doing more than referring to such enticing subjects as "Puncture of the Heart in Chloroform Syncope," "Aspiration in Air-Embolism," "The Treatment of Gangrene of the Lung," "Subphrenic Abscess," and the "Surgical Treatment of Tuberculous Cavities in the Lung." If our readers are interested in these subjects they cannot take a better guide than Mr. Stephen Paget.

The work is valuable not only as a storehouse of facts and an exposition of surgical advance in one of the most difficult regions of the body, but also as showing how much of our advance must depend on accurate knowledge, careful observation, and boldness which is not rash.

The Education of the Central Nervous System: a Study of Foundations, especially of Sensory and Motor Training. By Reuben Post Halleck, M.A. (Yale). New York: The Macmillan Company. 1896.

This work is well calculated to be of service to intelligent parents and teachers as a valuable guide in the training of young people from infancy to maturity. It opens with an elementary account of the structure of the brain and spinal cord, which is on the whole good, though exception may be taken to some points in the illustrations on pp. 11 and 18 (figs. 4 and 8.) The writer then goes on to consider certain fatalistic aspects, and expresses his conviction, based upon experience, that young nerve cells are more amenable to training than any other matter of which he has knowledge. He then discusses the modes in which the brain may be modified by training, in regard to its sensory, its motor, and its highly important associative portions. We have next a chapter on attention, nutrition, and fatigue, and then one on environment and training. In connection with the subject of age and training, the author remarks that "the old theory that education consists solely in modifications in an immaterial entity has worked untold damage. It was argued that the immaterial never grew old, and that it could be trained as well at one time as at another." And he wisely observes further that "a well trained nervous system is the greatest friend that the mind can have. An ill trained nervous system is a relentless enemy to the higher mental powers. It follows its victims and thwarts their aims until the pitying grave stops it." In the chapter on general sensory training, the author examines the character of the sensory images employed by Shakespeare and Milton, and gives numerous poetical illustrations which ought of themselves to be sufficient to commend the work to those of literary tastes. Extensive lists are given of sights, sounds, odours, &c., which the child ought to be trained to recognise by the use of one or other of his special senses. The tendency nowadays is to push book knowledge too far, and at the same time to give the special senses a very imperfect training. The kindergarten system is a judicious remedy for this in the case of the youngest scholars, but in primary and secondary education much remains to be put right. It is to be hoped that this excellent volume will come into the hands of many who are in a position to put into execution some of the important educational reforms which it advocates.

Report on the Causes and Prevention of Smoke from Manufacturing Chimneys. By HARVEY LITTLEJOHN, M.A., M.B., B.Sc., F.R.C.S. Ed. Sheffield: Townsend & Son. 1897.

THIS report was furnished to the city of Sheffield at the request of its Health Committe at the time when the author of it held the position of Medical Officer of Health, and it forms a valuable contribution to the literature of smoke-prevention, which has well-nigh become the despair of sanitarians up till the present time. Beginning with a short historical survey of the subject, Dr. Littlejohn brings out the salient points of the Parliamentary Committees' Reports on Smoke Prevention of 1819, 1843, 1845, and 1846, of the Report of the General Board of Health of 1855, and of the Letter of the Secretary of State to Local Authorities of 1866, and he notes the legislation which has resulted therefrom. Considering the vast amount of evidence which has been taken, it is disappointing to find that in English law all that has been enacted consists of a clause in the Towns' Improvement Clauses Act, 1847, and of certain sections of the Public

Health Act, 1875. He next discusses the sources of the smoke nuisance and its causes, more particularly with special reference to Sheffield; and while admitting the unenviable notoriety of Sheffield for its murky atmosphere, he very properly points out that this arises from the fact that it is the seat of manufactures which depend chiefly upon the combustion of coal in furnaces, not steam-generating. That such a blackened atmosphere should exist in Sheffield cannot be wondered at when we know that within the city area of 30 square miles there is an annual consumption of coal estimated at one and a quarter million tons, contrasted with which London, with an area of 225 square miles, burns only a like quantity. The author deals at some length with the effects of the smoke nuisance on the public health, in the production of fog and rain, the obstruction of sunlight, and the formation of a smut-laden atmosphere which is causative of general griminess, and in addition to all this, in the enormous amount of chemical gases which is annually discharged into the air. The means of prevention deservedly occupy an important place in the *Report*. The author holds it as proved that the smoke nuisance may be largely prevented by the use of smoke-consuming apparatus and by careful and continuous attention to "stoking." The apparatus which in his experience produce the best uniform results are "coking stokers" and Oates' apparatus. Probably the most novel features in the *Report* are the author's suggestion that, by the larger and more general use of gas in manufacturing processes, the evil may be minimised, and his opinion that this is quite practicable for many processes in which coal is presently used. At present, however, gas as a heat-producer in trade processes is still on its trial, and, doubtless, time and experiment will test its value and applicability. We commend a perusal of the *Report* to sanitarians, engineers, and smoke-producers in the hope that it may assist in bringing about the time when, by the better consumption of smoke, the denizens of populous places will see more of the sunlight, and will have purer, and therefore more healthful, atmospheres in which to live.

A Text-Book of Histology, Descriptive and Practical, for the Use of Students. By ARTHUR CLARKSON, M.B., C.M. Edin. Bristol: J. Wright & Co. 1897.

THIS work is one of the best text-books published within recent years on the subject of which it treats. It presents the facts of histology in an exceedingly clear, concise, and intelligent manner, and is worthy of the attention of all students engaged in the study of this subject. The first two chapters are devoted to the general methods of histology; in connection with the processes for hardening we note the absence of any mention of Erlick's fluid. The staining process is very well treated; the author has been judicious in not attempting to mention every possible staining fluid, those reagents selected by the author being quite sufficient for all purposes. This division of the work requires no further comment on our part, unless we express the opinion that diagrams of the different microtomes might have been included with advantage.

The remaining chapters of the book take up the different tissues and organs of the body in detail; the descriptive matter is obviously unequal, the thyroid body being dismissed in rather less than one page, while ten pages are devoted to the suprarenal capsules. The author's account of the development of bone is particularly lucid; that on the development of the teeth is the best we have seen in any ordinary histological text-book. The chapter on the nervous system is the most inadequate of the whole book; it contains no account of the structure of the pons, mesencephalon, pineal body, or basal ganglia. The demarcation of the tracts in the spinal cord is not so definite as it might have been. There is no mention of Marchi's method of staining, a method much used for the investigation of degeneration.

The great feature of the work is the excellence and beauty of its numerous coloured diagrams. The coloured illustrations, which are all original, are most correct in their details; for delicacy of colour and perfection of finish they surpass any other series we have ever seen. We are convinced that the author must have expended a vast amount of time and labour in the execution of the illustrations. Finally, we believe that the book will prove of great assistance to the student engaged in the study of this subject.

Exercises in Practical Physiology. By AUGUSTUS D. WALLER, M.D., F.R.S. Part I: "Elementary Physiological Chemistry." London: Longmans, Green & Co. 1897.

THIS little work, of twenty-four pages, by a well known physiologist, will prove itself invaluable to students of medicine. It contains practical exercises on every subject that is included in all ordinary examinations on physiological chemistry. The style adopted is terse and agreeable; the tests given are well arranged. The lessons on the examination of the common food stuffs and of the more important fluids and tissues of the body are extremely good. Several important facts, not often recognised, are insisted upon in Dr. Waller's footnotes. A lesson on the known facts illustrative of the coagulation of the blood would have been useful; this may be included in a second edition. On the whole we heartily commend the work as being eminently fitted for laboratory use.

Handbuch der Physiologischen Optik. Von H. von HELMHOLTZ. Hamburg and Leipzig: Leopold Voss. 1896.

WE have at last received the final portions of the new edition of this standard book. We do not intend to review it, for that would be distinctly out of place in the pages of the *Glasgow Medical Journal.*

It is a matter to be thankful for that occasionally a work appears which is calculated for the specialist, and in which the author does not openly plead his own weakness by saying that it is written for "students and general practitioners." The volume under consideration is essentially one for the ophthalmic specialist.

It is unquestionably the best, if not the only good book, on certain parts of the subject. Without the knowledge which is here given, at anyrate in its more general aspects, no one should claim the title of specialist. It is to the student of ophthalmology what "Thomson and Tait" is to the student of dynamics. No doubt, time, with the further researches which it will bring with it, must change a good deal of what is mere theory, but it cannot well alter principles, and this work must for many years form one of the standards of ophthalmic science and a monument of the genius of its learned author.

In large part it has to deal with physiology, and little of finality can be predicted as yet about such matters. The theories of this month are, as a rule, upset at the latest next month by other theories which are, to other minds, equally untenable, and so on. But it may be said with truth that Helmholtz's work forms the sure basis and foundation of all modern ophthalmic practice, and he who desires to be in reality a specialist ought to get at the root of the matter.

As is well known, quite recently an attempt, and as yet a very successful attempt, has been made to show that Helmholtz's views as to the action of the lens in accommodation are not correct. But this no more dims the reputation of Helmholtz than does Sir Isaac Newton's failure to discover the wave theory of light detract from the honour due to him.

The changes wrought by Helmholtz in ophthalmology have been enormous, and here we have the record of his labours. Till quite recently it was not uncommon to find large clinics in which the refraction ophthalmoscope was not in use, and we can remember the ridicule with which our first examinations by the shadow test were received. As further illustrative of the present changed aspect of affairs, we may mention that not many years ago we found a house surgeon in an English eye hospital who could not examine the fundus by the indirect method, and who was quite unable to estimate an error of refraction. Such anomalies are entirely things of the past, and we owe it chiefly to the German philosopher.

Ligaments: their Nature and Morphology. By J. BLAND SUTTON, F.R.C.S. Second Edition. London: H. K. Lewis. 1897.

A NUMBER of years have elapsed since the first edition of this unique work was published; during the interval, fresh facts have been constantly added to our previous store of morphological knowledge. Laborious work and persistent accurate observation are requisite in order to produce a book of its nature, and we feel that Mr. Sutton's long connection with the Zoological Gardens has eminently fitted him for such a task. We should have been sorry had the author allowed this work to go out of print, as there is no other published in this country which could have taken its place. The author states that "to sort out from among the enormous heap of structures known as ligaments those which can boast a noble descent, and trace the history of their downfall is the object of the present treatise." In the present edition the text has been rearranged, new facts have been intercalated, several new illustrations added, and a very interesting chapter on the ligaments of the larynx has been included. It is difficult to select one part as being more interesting than another, in fact, every sentence is of interest; but we specially admire the articles on the knee-joint, the shoulder and pelvic girdles. The facts contained in this book, and the arguments based on these facts, have done much to build up the doctrine of evolution. We very much doubt Mr. Sutton's opinion that the triangular masses of fibres in the lumbar aponeurosis are homologous with the levatores costarum; if they were, they would be attached to the anapophyses of the lumbar vertebræ, which are regarded by most anatomists as the homologues of the dorsal transverse processes. Mr. Sutton has wisely, we think, altered his opinion in regard to the origin of the lesser sciatic ligament. We commend this book to all students of anatomy, especially to those who are working for the higher anatomical examinations.

Practical Hints on District Nursing. By AMY HUGHES. London: The Scientific Press, Limited. 1897.

THIS little manual is full of commonsense, and contains some most practical advice for those beginning district nursing. Miss Hughes states the difficulties which will be met with in the course of work among the sick poor, and points out how they may be best dealt with. Her ideal district nurse is above all a tactful person, who, while thoroughly trained in all branches of nursing and in the laws of hygiene, is yet careful in applying them to feel her way gradually with the patient and patient's friends, and by so doing gives them confidence and doubles her own influence for good.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections, from the Museum of the Saint Louis Hospital, Paris. Edited and annotated by J. J. Pringle, M.B., F.R.C.P. Part VII. London: The Rebman Publishing Co., Ltd. 1897.

PART VII of this atlas contains plates illustrative of the following conditions:—(1) Eruption from Bromide of Potassium (Lucien Jacquet); (2) Hypertrophic Papular Syphilides (Lucien Jacquet); (3) Rupioid and Early Gangrenous Syphilides (Hallopeau); (4) Gangrenous Syphilides (Henri Feulard). The high artistic merit of the atlas, to which we have already frequently directed attention, is maintained.

Parts VIII and IX are also to hand.

The Medical Annual or Practitioners' Index. Bristol: J. Wright & Co. 1897.

THE present is the fifteenth issue of the *Medical Annual.* It has as usual a distinctive note of its own, and fully merits professional confidence and support. In addition to specific uses of new remedies, and a critical summary of the therapeutic progress of the year, the volume contains several valuable special articles written by recognised authorities. There are also a number of highly successful illustrations. Most of our readers ere this have, we expect, studied the *Annual* for themselves. We congratulate all concerned in the production of this serviceable manual.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

NERVOUS DISEASES AND INSANITY.

By Dr. R. S. STEWART.

Pellotine as a Sedative and Hypnotic. By Hutchings (*New York State Hospitals Bulletin*, January, 1897).—This is an alkaloid obtained from several varieties of cactus, and is found in the market in the form of muriate, a white crystalline salt, freely soluble in cold water, and of a bitter gourdy taste, which is not persistent or very disagreeable. At present it is only to be obtained in small quantity, and at great cost. Given in one hundred instances to ten patients in half-grain doses it induced particularly calm and natural sleep without headache or nausea, and the only objectionable effect was a tendency to produce vertigo when given in full doses, and in one case actual loss of consciousness supervened.

Delirium Grave. By Rowley (*American Journal of Insanity*, April, 1897).—It is claimed that this affection constitutes a distinct psychosis, and has not necessarily any definite relationship to a primary physical condition. Of the fifteen cases, which is the total number admitted during eleven years into the Northern Michigan Asylum, 73 per cent had a fatal termination. The average age was 38 years; 66 per cent had had one or more previous attacks of insanity, and the average duration on admission was sixteen days. The symptomatology was one of profound mental excitation, usually occurring in degenerate individuals and developing suddenly. The temperature was high. In several cases albumen was present in the urine along with an excess of phosphates, and in the majority of the fatal cases there was incontinence of urine and fæces. The results of treatment were unsatisfactory; hypnotics proved of only temporary value, and ergotine was of little avail, but duboisine hydrochlorate in one case relieved the muscular excitability and produced rest and sleep. In the fatal cases there were found exudates, adhesions, softenings, and hyperæmias, and other evidences of inflammatory cerebral processes.

Affection of Taste and Smell in Tabes. By Klippel (*Archives de Neurologie*, April, 1897).—Gustatory and olfactory symptoms in tabes are, this writer thinks, much more common than is generally supposed. He groups them under the two heads of anæsthesia and perversion, and when marked they are accompanied by other signs indicative of bulbar invasion, such as troubles of deglutition, intense salivation, affection of sensibility in the sphere of the trifacial, and permanent paralysis of the muscles of the eyelids.

An Unrecognised Source of Lead Poisoning. By Charcot and Yvon (*Archives de Neurologie*, May, 1897).—The manufacture of artificial flowers has not hitherto been recognised as a source of lead poisoning, and the occurrence of a case in which all the classic symptoms of lead paralysis with other indications of poisoning were present, led to minute inquiry and analysis. The patient had been employed ten years in winding green paper strips round the green-painted stems of the flowers, and in doing so she was accustomed to moisten the corner of the strip with her tongue to make it adhere more readily, repeating the process on arriving at the end of the band. The papers most commonly employed varied in colour from brown, through greenish-brown, blue-green, and yellow-green, to pure yellow, and it was found that those forming a colour scale from greenish-yellow to greenish-blue contained an appreciable amount of lead. The colouring matter is formed of a mixture of blue and yellow, and the latter consists of chromate of lead. It was asserted that the lead present was in the form of an insoluble salt, but the chromate is easily soluble in caustic alkali, and it was found that the alkaline saliva was capable of dissolving very appreciable traces of this salt, and these writers have no hesitation in affirming that in the case here recorded the symptoms observed were due to the slow absorption of the metal from prolonged manipulation of the lead papers.

The Terminal Period of General Paralysis. By Arnaud (*Archives de Neurologie*, June, 1897).—At this stage of general paralysis, this writer recognises two varieties. Many paralytics become progressively enfeebled, and finally lose, a greater or shorter length of time previous to death, the power of walking or maintaining the upright posture; but a certain proportion—one half, it is estimated—remain unconfined to bed, and preserve up to death a liberty of movement sufficiently great to enable them to go about. These two categories are distinguished principally by the precocious appearance in the first of muscular rigidity, pronounced spasms, and more or less permanent contractures, while in the second these symptoms are wanting, or are present only in a very feeble degree. Further, cerebral seizures play an important part in the death of paralytics; they are the natural and most frequent cause. As to trophic troubles, the writer thinks that the most part will become exceptional when it is recognised that they are not a necessary part of the disease, and that they can ordinarily be prevented.

SURGERY.

By T. W. JENKINS, M.A., M.D.

Nos. 1 and 2 of the new bimensual *Revue de Gynécologie et de Chirurgie Abdominale*, edited by Pozzi, contain the following communications:—

"Resection and Ignipuncture of the Ovary," by Pozzi.
"A case of Deciduoma Malignum," by Monod and Chabry.
"Acute Decubitus as a complication of Vaginal Hysterectomy," by Segond.
"Gastro-enterostomy, a study based on fifty operations," by Roux.
"Treatment of Uterine Fibroids by Abdominal Hysterectomy," by Richelot.
"Radical Vaginal Operation for Tumours of the Uterine Adnexa," by Segond.
"A contribution to the Pathogenesis and Pathological Anatomy of Cysts of the Ovary," by Pozzi and Beaussenat.
"Appendicitis and Parametritis," by Treub.
"A Vegetable Anastomotic Button for Circular Enterorraphy," by Stimson.
"Experimental Appendicitis," by Beaussenat.
"The Life and Works of Sir Spencer Wells," by Cullingworth.

Each number contains in addition elaborate and valuable abstracts of contemporary literature dealing with gynæcology and abdominal surgery.

Resection of Ovary.—For certain benign neoplasms and *chronic oöphoritis* Pozzi advocates, in place of ablation, resection of the diseased portion with ignipuncture of more deeply placed cysts. Hæmorrhage is controlled by cauterisation of the cut surface and by ligature. The one condition of the operation is integrity of the tube. Salpingostomy is condemned, but a qualified approval is given to salpingorrhaphy, or unfolding of the agglutinated fimbriæ and introduction of the free end of the ovary into the infundibulum thus formed. The *technique* is well described and illustrated. Details of 62 cases follow in tabular form. The results are good—12 out of 48 patients became pregnant, and in 4 of these both ovaries had been resected.

Deciduoma Malignum.—Monod and Chabry describe a case following upon abortion characterised by profuse hæmorrhages, uterine enlargement, emaciation and weakness out of all proportion to the pelvic condition, and presence of decidual cells in *débris* removed by curette. Diagnosis was made four months after onset of symptoms and hysterectomy performed. Examination of uterus showed presence of a malignant growth, the muscular fibres being destroyed by the elements of a neoplasm composed of cells of purely decidual type. No trace of structures of fœtal origin. The authors therefore adhere to the name *deciduoma malignum*, or, from a histological point of view, *sarcoma deciduale.*

Experimental Appendicitis.—Beaussenat summarises the results of numerous experiments as follows:—

1. Appendicitis is almost always due to infection.
2. Infection may occur through the blood-vessels and lymphatics, but is generally of intestinal origin.
3. The most frequent agent is the bacillus coli communis.
4. Before the agent can act, the vitality of the mucosa must be modified or the defensive phagocytosis weakened.
5. The infective folliculitis which characterises every appendicitis spreads by the perifollicular lymphatics, and peri-appendicular adenitis, suppurative or not, is constant.
6. The predisposing causes create the initial lesion, or favour infection by diminishing the chances of resistance.
7. The predisposing cause *par excellence* is entero-colitis.

Gastrostomy by a Circular Valve Method.—A paper by Senn (*Journal of American Medical Association*, 28th November, 1896) appears *in extenso* among the abstracts. Senn operated on a case of œsophageal stricture as follows:—(1) Incision 10 cm. long parallel to left costal arch; (2) part of stomach wall near great curvature raised above level of wound in form of a cone; (3) base of latter constricted by circular suture involving serous and muscular coats; (4) constricted part supplemented by *collar* of omental tissue; (5) attachment of latter and stomach to margins of wound (except skin); (6) rest of wound closed; (7) projecting part of stomach incised and tube passed into cavity; (8) flaps inverted and secured with Lembert sutures; (9) tube removed.

The advantages claimed for this procedure are—(1) retention of gastric juice by valve of *ventricular* origin; (2) closure of fistula during digestion; (3) trifling dislocation of stomach during operation.

Gastro-Enterostomy.—Roux, of Lausanne, breaks a lance in favour of *gastro-entérostomie retrocolique posterieure en Y.* Seldom practised on account of the time it involves, it offers many advantages. The general indications are—cancer of the pylorus with or without stenosis; adherent pyloric cicatrices; elongated stenosis of the pylorus; ulceration and stenosis of the duodenum; intractable dyspepsia with or without ulceration of the pylorus or duodenum; atony of the stomach.

Buccal insufflation is practised to indicate position of great and small curvatures of the stomach, and the mobility of the pylorus. The position of the latter is very variable. Roux has found it in the iliac fossæ, beneath the umbilicus, behind the left costal arch, beneath the liver. It is the *facteur rural de l'abdomen.*

Since operating for intractable dyspepsia and atony of the stomach, Roux has seldom found an intact pylorus.

Dilatation of the stomach is very rare; *descent*, on the other hand, common, and always secondary to constriction (corset, &c.) Glénard's disease is not due to primary relaxation of tissues.

The operation itself consists in reaching the posterior wall of the stomach through the transverse meso-colon; section of the jejunum 15 to 30 cm. from its origin; attachment of distal end to opening in stomach, and lateral jejuno-jejunal implantation of upper end. Ether anæsthesia is preferred. A few hours after operation the patient is allowed to drink water, champagne, tea, or milk. Excessive vomiting is met by lavage of the stomach. From next day the patient *commande son menu.*

After this operation the stomach is found to assume its normal position, its functions become normal, food does not accumulate, and the new pylorus acts like the old one. Descriptive cases and plates illustrating the operation are appended.

Closure of the Abdomen after Laparotomy.—Felice La Torre (*La Gynécologie*, February, April, and June, 1897) deals at length with the various elements of the problem how best to prevent hernia after laparotomy (tissues to be joined, material and method of suture). Hernia is due to yielding or tearing of the cicatrix which unites the edges of the recti, or to want of success in obtaining their union by first intention. Too much attention is usually paid to the aponeurosis (which, being poorly supplied with blood, is not likely to afford a resistant cicatrix) and too little to direct union of *muscular* tissue. The author supports his views by experiments on animals, and gives microscopic sections of cicatrices obtained by different methods. The paper is further enriched by the replies of a large number of surgeons to the following questions—(1) What is the cause and frequency of hernia after laparotomy? (2) Should one incise the linea alba or the m. rectus? (3) What is the best method of suturing, and what the best kind of suture? (4) How does infection of the abdominal wound arise? (5) What sutures are most easily sterilised, and how?

The author's procedure is as follows:—

1. Continuous catgut suture through peritoneum.
2. Excision of inner edges of recti muscles (some muscular tissue being removed)—*i.e.*, removal of linea alba and a small part of the adjacent muscles.
3. Continuous catgut suture through edges of fascia transversalis or layers of posterior muscular sheath.
4. Interrupted silk or catgut sutures through recti muscles.
5. Continuous or interrupted sutures (catgut) through aponeurosis.
6. Superficial sutures, continuous or interrupted, of silk, silver wire, or silkworm gut.

Reverdin's method of sterilising gut has been found satisfactory. It is as follows:—

1. Eight hours in ether.
2. Wash in fresh ether, dry, and wind on cylinders which are put into test-tubes closed with cotton wool.
3. Transfer to hot-air stove. Elevation of temperature must be gradual: 100° C. in course of an hour; 150° C. within another hour and a half. When the latter temperature has been maintained for two hours, heat is withdrawn.
4. Ten hours later, renewal of heating process.
5. Twenty-four hours in oil of juniper.
6. Preserve in absolute alcohol.

This gives "*un fil parfaitement stérile.*"

Books, Pamphlets, &c., Received.

Nervous Affections of the Hand, and other Studies, by G. V. Poore, M.D. London: Smith, Elder & Co. 1897. (7s. 6d.)

A Pictorial Atlas of Skin Diseases and Syphilitic Affections, from the St. Louis Hospital, Paris. Edited by J. J. Pringle, M.B. Part IX. London: The Rebman Publishing Company, Limited. 1897. (10s. 6d.)

A Contribution to the Natural History of Scarlet Fever, by John T. Wilson, M.D., D.P.H. London. 1897.

County of Lanark: Sixth Annual Report upon the Health and Sanitary Condition of the County, 1896, by John T. Wilson, M.D., D.P.H. Glasgow: Robert Anderson. 1897.

The Insane Poor in Private Dwellings and Licensed Houses, by J. F. Sutherland, M.D. Edinburgh: E. & S. Livingstone. (6d.)

The Surgical Diseases of Children, by Edmund Owen, M.B. Third Edition. London: Cassell & Co., Limited. 1897.

The Mineral Waters of Caledon, by G. W. B. Daniell, M.R.C.S., &c. Cape Town: *Cape Times* Printing Works. 1897.

Diseases of the Liver, Gall-Bladder, and Biliary System: their Pathology, Diagnosis, and Surgical Treatment, by H. J. Waring, M.S., B.Sc. Lond. Edinburgh and London: Young J. Pentland. 1897.

The Phonographic Record of Clinical Teaching. Vol. II, No. 5. May, 1897.

Schedule for Plant Description, by John Wishart. Edinburgh: E. & S. Livingstone. (6d.)

Grundriss der Entwicklungsgeschichte des Menschen und der Säugethiere, von Dr. Med. Oscar Schultze. Zweite Hälfte. Leipzig: Wm. Engelmann. 1897. (M. 6.)

Clinical Manual of Mental Diseases for Practitioners and Students, by A. Campbell Clark, M.D. London: Baillière, Tindall & Cox. 1897. (10s. 6d.)

Manual of Bacteriology, by Robert Muir, M.D., and James Ritchie, M.D. Edinburgh and London: Young J. Pentland.

Excretory Irritation and the Action of Certain Internal Remedies on the Skin, by David Walsh, M.D. London: Baillière, Tindall & Cox. 1897. (3s. 6d.)

Harvey and Galen: The Harveian Oration, 1896, by Joseph Frank Payne, M.D. London: Henry Froude. 1897.

Diseases of the Eye: a Manual for Senior Students, by J. Arthur Kempe, F.R.C.S. Edinburgh: E. & S. Livingstone.

Diseases of the Skin, by "Utile Quod Facias." Edinburgh: E. & S. Livingstone. 1897. (2s. 6d. net.)

The Extinction of War, Poverty, and Infectious Disease, by a Doctor of Medicine. London: E. Truelove. 1897. (6d.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FIVE WEEKS ENDING 26TH JUNE, 1897.

	WEEK ENDING				
	May 29.	June 5.	June 12.	June 19.	June 26.
Mean temperature, . .	51·3°	57·1°	54·7°	53·1°	58·1°
Mean range of temperature between day and night, .	16·5°	17·0°	16·0°	13·2°	16·5°
Number of days on which rain fell, ...	6	3	3	7	4
Amount of rainfall, . ins.	3·01	2·40	0·40	6·04	0·86
Deaths registered, . . .	278	265	273	258	249
Death-rates, ...	20·2	19·3	19·9	18·8	18·1
Zymotic death-rates, . .	2·6	2·7	2·7	2·5	1·8
Pulmonary death-rates, .	5·6	5·4	6·1	5·2	5·2
DEATHS—					
Under 1 year, ...	60	60	50	51	50
60 years and upwards, .	49	56	53	49	41
DEATHS FROM—					
Small-pox, ...	...	...	1	...	...
Measles, ...	4	6	7	5	2
Scarlet fever, ...	1	...	...	3	1
Diphtheria, ...	3	...	...	...	2
Whooping-cough, . .	18	21	14	13	10
Fever, ...	4	2	6	4	5
Diarrhœa, ...	6	8	9	9	5
Croup and laryngitis, .	2	...	...	...	2
Bronchitis, pneumonia, and pleurisy, . . .	55	45	54	47	47
CASES REPORTED—					
Small-pox, ...	1	...	...	...	1
Diphtheria and membranous croup, ...	5	5	1	3	9
Erysipelas, ...	15	25	20	17	13
Scarlet fever, ...	36	40	50	36	28
Typhus fever, ...	...	...	...	...	...
Enteric fever, ...	8	11	11	15	22
Continued fever, . . .	...	...	...	...	...
Puerperal fever, . . .	...	...	1	3	1
Measles,*	88	72	61	62	56

* Measles is not notifiable.

SANITARY DEPARTMENT,
GLASGOW, *30th June, 1897.*

THE

GLASGOW MEDICAL JOURNAL.

No. II. August, 1897.

ORIGINAL ARTICLES.

SEQUEL TO A CASE OF LARGE FÆCAL TUMOUR.

By GEO. S. MIDDLETON, M.D., F.F.P.S.G.,
Physician to Glasgow Royal Infirmary.

In the May number of this *Journal* for the year 1894 three cases of fæcal tumour were recorded. The further history of the second of these, James D., can now be given.

Having had under my care in the Infirmary during the past winter a boy with a large fæcal tumour, early in May I sent for James D. to come to see me. Finding that a fæcal mass had again accumulated, I advised him to come into hospital, which he did on 29th May. The following notes are from the ward journal:—

"*31st May.*—For about eighteen months after his discharge, he remained very well, with an almost daily movement of the bowels. During the last eighteen months, however, he has had gradually increasing constipation, and for a considerable time his bowels have moved only once or twice a week, and never without the help of powerful purgatives.

"The boy has a pasty, anæmic appearance, and is thin, with, however, a greatly distended abdomen, the circumference of which, five inches above the umbilicus, is twenty-seven inches. The abdominal distension is irregularly distributed, is greater in the upper half of the abdomen than in the lower, and more marked to the right of the middle line than to the left of it. Peristaltic movements of the intestines are frequently visible, and indicate a highly distended gut. The direction of the movement seems to vary, sometimes to the right, sometimes to the left, but the general impression is that the distended bowel is large intestine. Percussion note is highly tympanitic all over the abdomen, except immediately above Poupart's ligament, where the note is rather more dull on the right than on the left. On deep palpation above the pubes a hard tumour is felt on both sides of the middle line. It is somewhat movable, but the tenderness caused by pressure prevents very free handling. A renewed examination within a quarter of an hour discovered that the tumour had moved upwards and a little to the right of the middle line, and that firm pressure left the impress of the fingers on it.

" He does not now complain of any difficulty in micturition. He vomits occasionally, and has done so since admission. The vomited matter is a more or less yellowish fluid with curdled milk, and somewhat sour in smell, but not at all fæculent. He has had some looseness of the bowels, and a motion seen this morning is of a dark slate colour, and contains neither formed fæces nor scybala. Digital examination of the rectum finds it absolutely empty, and fails entirely to discover the tumour mass, but withdrawal of the finger is followed by a free discharge of the same dark slate-coloured fluid.

" The greatest cardiac impulse is felt in the third interspace, inside the nipple and slightly above it. The upper border of the dulness is in the second intercostal space. There is no murmur. The liver dulness cannot be made out."

" *1st June.*—The boy died during the night. Late in the evening he was somewhat restless, but he fell into a sleep. About 2 A.M. the nurse's attention was attracted by his deep breathing, and he was seen to be twitching, more on the right side than on the left. His extremities were cold, but he was conscious, and said he was " fine." Stimulants were administered, but the extremities never became warm, while the temperature rose to over 104°. Twitching became more marked, and after a brief period of unconsciousness, he died about 4·30 A.M. He made no complaint, and in particular no complaint of pain in the head or in the abdomen. He had no vomiting and no abdominal symptoms."

The death of this boy came quite as a surprise. Thinking that it might have arisen from rupture of an ulcerated intestine, I made special enquiries of the night nurse, but could obtain no other information than recorded in the above note. The few temperature observations made are as follows:—29th May —99°, 97·8°; 30th May—97·4°, 99·6°; 31st May—97·4°, 101·6°; 1st June—104·2°, 104°. The rapid rise of temperature that took place on the evening before and up to the time of his death, suggested a rapidly acting cause, and the nervous symptoms made me suspect some form of blood-poisoning.

Permission was granted for an examination of the body, with the restriction that the head should not be opened. Accordingly, on 2nd June, Dr. Workman made the examination.

On opening the abdomen, the enormous distension of the colon was very evident, and the rectum and the sigmoid flexure were seen to be greatly displaced. The rectum and the lower part of sigmoid flexure lay partly to the right of the middle line, and, running up towards the xiphoid cartilage, there made a somewhat acute turn, the colon then running down to the left of the middle line to pass below the pelvic brim, and then to turn upwards in the normal position of the sigmoid flexure. A little above the sphincter ani a hard fæcal mass was found, weighing 5½ oz. The colon contained gas and a little fluid fæces. The small intestine was not much distended, but Peyer's patches were found to be much congested and swollen; this part of the intestines contained fluid fæces. The spleen was perhaps slightly enlarged and of firm consistence. Many of the mesenteric glands were enlarged and caseous. The stomach was somewhat distended, but otherwise healthy. The liver and the kidneys were believed to show evidences of cloudy swelling. The left ventricle of the heart was hypertrophied and empty. The lungs were remarkably healthy.

As the condition of Peyer's patches led Dr. Workman to a diagnosis of enteric fever, a diagnosis which the clinical history did not support, the spleen and a portion of the small intestine were handed to Dr. M'Crorie for bacteriological examination, and I give his report in detail:—

"Cover-glass preparations made direct from spleen (and stained) revealed the presence of diplococci. No other micro-organism was seen.

"Bouillon-tubes were inoculated from spleen and Peyer's patch and placed in incubator for twenty-four hours, at the end of which it was evident that an abundant growth had occurred in each. Cover-glass preparations from spleen bouillon culture showed the presence of diplococci and of bacilli with rounded ends, which morphologically resembled the bacillus typhosus or the bacillus communis coli; those from bouillon culture from Peyer's patch showed the presence of bacilli of different sizes.

"Elsner's and carbol-gelatine plates were made from these bouillon cultures, and the results were as follows:—

"*Spleen.*—1. Elsner's plates: no colonies developed.

"2. Carbol-gelatine plates: numeroussmall colonies developed, even in the third dilution. Under low power these colonies were seen to be identical. No colonies at all like those characteristic of bacillus typhosus or bacillus communis coli were found on plates. Cover-glass preparations showed that the colonies present were those of a diplococcus of the size and appearance of Fränkel's diplococcus.

"*Peyer's Patch.*—Elsner's plate: typical colonies of bacilli communis coli developed. Cover-glass preparations, &c., confirmed this view.

"*Note.*—The bacilli which resembled bacillus typhosus and bacillus communis coli in size and shape were probably germs of putrefaction. The fact that they do not grow on Elsner's nor on carbol-gelatine plates proves that they are neither bacillus typhosus nor bacillus communis coli."

This report confirms my own view that the boy did not die of enteric fever. Nothing occurred during his residence in the ward to raise the question of such a diagnosis, and I do not regard enlargement of Peyer's patches as pathognomonic of that disease.

Just as in the third case recorded in the paper above referred to, there was here also a history of occasional sickness and vomiting and a sudden rise of temperature. I am inclined to the opinion that, in both cases, these were induced by the absorption of a ptomaine developed in the intestine, and it is quite possible that in the process of absorption Peyer's patches might have got enlarged. The discovery of a diplococcus similar to Fränkel's is very interesting in connection with the nervous symptoms that preceded the fatal termination. Such a diplococcus is so commonly met with in meningitis that it is a great pity that examination of the brain was not allowed.

There was in this case no trace of ulceration of the mucous membrane of the intestine directly due to the presence of the fæcal tumour, and, therefore, no cause for perforation of the colon.

So far as my examination went no light was thrown on the question of the pathogenesis of such cases. The dilatation of the colon may have been congenital, as is believed by some, or it may have resulted from continued constipation and gaseous distension. But the late history of this case clearly shows the necessity for continued watchfulness of the bowels, even after apparent cure of the disease has been obtained.

A SERIES OF INTESTINAL PREPARATIONS.[1]

BY L. R. SUTHERLAND, M.B.,

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1. *Examples of Diverticula of the Intestine* ("*False Diverticula*").

(*a*) *Duodenal pouches at the opening of the bile-duct.*—In the portion of duodenum preserved the main duodenal papilla with the opening of the conjoined common bile-duct and pancreatic duct is shown, a piece of whalebone being inserted into the latter. At a point 2·5 cm. above this, and to the left, is a smaller papilla with the opening of the duct of Santorini.

On each side of the main papilla is an aperture about 7 mm. in diameter. This is seen to be the opening of a thin-walled pouch-like protrusion. On the right side the pouch has a maximum diameter of 1·4 cm., and on the left side of almost 1 cm. Both were found embedded in the substance of the pancreas, and contained a small amount of bile-stained mucus.

Nowhere is there evidence of ulceration in this portion of the bowel. A few small tubercular ulcers were present in the lower part of the ileum and in the colon, and the intestine throughout was markedly amyloid.

Alex. M'G., aged 45, died in Dr. Tennent's wards of advanced phthisis pulmonalis. Diarrhœa was not a prominent symptom. The patient had suffered from hæmorrhoids for two years before death.

(*b*) *Duodenal pouches at the opening of the bile-duct.*—This specimen may be regarded as illustrating a more advanced stage of the condition shown in specimen (*a*).

Pieces of whalebone have been passed through the common bile-duct and pancreatic duct, and emerge at the main duodenal papilla. Above and to the left is a smaller papilla with the duct of Santorini. This may be seen entering the wall of the intestine from behind.

On each side of the main papilla is an aperture leading into a thin-walled sac. On the left side the aperture has a diameter of 2·2 cm., and the ovoid sac a maximum measurement of 4·5 cm. On the right side the diameter of the aperture is rather less than 1 cm., and the rounded sac has a maximum measurement of 1·5 cm. The conjoined duct is thus seen to divide the two pouches, and to form part of the margin of both apertures.

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[1] **Read at a meeting of the Glasgow Pathological and Clinical Society on 12th April, 1897.**

Both pouches were in great part enveloped in pancreatic tissue, and contained a quantity of bile-stained mucus. Nowhere in the vicinity is there evidence of ulceration.

Isabella P., aged 50, presented symptoms during life of Addison's disease. Tuberculosis of both suprarenal capsules, with tuberculosis of the lungs, was found *post-mortem.*

There was slight ulceration of the intestine in the parts below the diverticula. There was no jaundice.

(*c*) *Single diverticulum ("false diverticulum") of small intestine.*—The diverticulum arises by an ovoid aperture 1·7 cm. in diameter from the attached border of the gut. The thin-walled sac, 4 cm. in diameter, is seen to project into the mesentery.

The specimen was removed from the body of a woman aged 65. There were several perforations of the intestinal wall, but the precise nature of these and their relation to the diverticulum is not known.

(*d*) *Diverticulum ("false diverticulum") of caput cæcum.* —A small portion of the cæcum with proximal extremity of vermiform appendix is preserved.

A diverticulum 8 mm. in diameter projects near the orifice of the vermiform appendix. Its wall is thin and does not appear to contain muscle. It was occupied by a hard pale-yellow rounded mass of fæces.

James H., aged 52.—There were no symptoms which could in any way be referred to the condition shown.

(*e*) *Diverticula ("false diverticula") of duodenum and cæcum.*—The upper of the two preparations was situated in the duodenum, 3 cm. above the main papilla on the posterior wall of the gut. The aperture measures about 2 cm., and is a nearly circular gap in the wall of the intestine. The sac itself measures about 3 cm., and has a thin wall. It was half buried in pancreatic tissue, and contained a small quantity of turbid mucus.

The second sac is in the colon, just above the ileo-cæcal valve. It has an aperture measuring 3·5 cm. in diameter, and the sac itself is of similar dimensions. The aperture has a ring of firm tissue, whilst the sac itself is exceedingly thin-walled. It was filled with a mass of blackish-brown feculent material of almost stony hardness. This was with difficulty dislodged.

Agnes P., age about 55, died an hour after admission to hospital, from cerebral hæmorrhage. As far as is known, the conditions shown did not give rise to definite symptoms.

(*f*) *Multiple diverticula* ("*false diverticula*") *of large intestine.*—Viewed from the inside there is a row of small apertures, which at one end becomes double and in two instances treble.

The diverticula are of various sizes, and in large part they project into the adipose tissue, where they present a distinct wall. Some project into appendices epiploicæ, as shown by pieces of whalebone inserted.

In this case over 45 diverticula were counted occupying the transverse and descending colon. Many were filled with firm masses of fæces, which were in some cases very difficult to remove.

Hugh M'F., aged 78, died after an operation for strangulated hernia.

(*g*) *Multiple diverticula* ("*false diverticula*") *of sigmoid flexure.*—The specimen is a portion of the sigmoid flexure which has been divided in its length. It presents a number of diverticula varying in size from a pea to a small hazel-nut, and protruding both from the free and attached borders of the gut. These were found to contain masses of hardened fæces. Most of the diverticula pass into appendices epiploicæ; one is seen passing into the meso-colon. About two dozen diverticula were found in this case occupying the sigmoid flexure, the transverse and ascending colon.

In addition to the actual diverticula there are seen at intervals slight depressions of the mucous membrane, with thinning of the underlying muscular coat. These are probably diverticula in process of formation.

The sacculation of the large bowel and the longitudinal muscular bands are well exhibited in the specimen.

Alex. D., aged 59, presented symptoms mainly referable to cardiac dilatation.

2. *Meckel's Diverticulum.*

(*a*) *Unusual form of Meckel's diverticulum* (*hammer-shaped diverticulum.*—Projecting from the unattached border of the intestine is a diverticulum 3·5 cm. in length. It arises by a well-defined circular aperture 1·4 cm. in diameter, and after narrowing somewhat ends distally in a hammer-head like expansion 2 cm. in length. From the poles of this expansion, as well as from its general surface, project a number —about a dozen—of thin-walled saccules of the size of barleycorns or larger. These are arranged in groups at the poles. There are a few strands of fibrous tissue running along the inferior body of the diverticulum, and a few fibres could be traced in the fresh state up towards the tip, but there is no proper mesentery nor can any obliterated vessels be made out. The diverticulum was situated 79 cm. above the ileo-cæcal valve, and projected free into the abdominal cavity. It was filled with semi-solid fæces. No other abnormality was found in the body.

Barbara C., aged 9, was admitted to Professor Gairdner's wards with symptoms pointing to pressure on the cord. After a residence of over four months she died from asthenia. Tuberculosis of the cervical and dorsal vertebræ was found *post-mortem*, and the spinal theca in the mid-cervical region was covered externally with a thick layer of caseous material.

(*b*) *Intestinal obstruction from adherent Meckel's diverticulum.*—The diverticulum arises from the free border of the ileum 26 cm. above the ileo-cæcal valve. It has a length of 5 cm., and is in the greater part of its course about 1·5 cm. in diameter. The last 2 cm., however, are much narrower and feel solid. It encircles and constricts a loop of ileum 18 cm. in diameter, its distal extremity being adherent to the posterior aspect of the mesentery. The loop of strangulated bowel is immediately beneath the attachment of the diverticulum. There is a stitch at the attached apex, from which situation by operation a softened gland was removed. The constricted loop was intensely hyperæmic and covered with fibrine. It was not gangrenous. Above the constriction the intestine is much distended; below the constriction it was collapsed.

George M., aged 10, began to complain of symptoms of intestinal obstruction six days before death. The abdomen was opened the day before death, but the constricting band was not discovered.

3. *Internal Strangulation.*

(*a*) *Strangulation of the small intestine by the slipping of the bowel through an aperture in an adhesion in the pouch of Douglas.*—The specimen shows a portion of the uterus with the anterior wall of the rectum turned downwards and backwards. There is a membranous expansion the result of stretched adhesions bridging over Douglas' pouch. In the midst of the adhesion there is a well-defined aperture 1·5 cm. in diameter, and in the immediate vicinity of this another smaller aperture through which the bowel has slipped and become strangulated. The obstruction is extreme, allowing of the passage of water only under very considerable pressure. The constricted loop of bowel measures 11 cm. in length. It had a dark livid-grey aspect, but was not gangrenous, and its serous surface was coated with a thin layer of fibrine. The constriction was found to end at a point 10 cm. from the lower end of the ileum. Above the obstruction the bowel was distended and filled with fluid or almost fluid fæces, while below it was collapsed and contained more solid fæces and, in its lower part, scybalous masses.

In addition to the pelvic adhesions there were fibrous adhesions between liver and diaphragm and in the vicinity of the vermiform appendix, which was found herniated into a subcæcal pouch and adherent. There was no tuberculosis in the abdomen, but cretaceous masses were found in the lungs and bronchial glands.

Eliz. C., aged 46, was admitted into Dr. Patterson's wards in an exceedingly collapsed condition, with a history of "persistent vomiting and complete constipation" of four days' duration. Abdominal distension without distinct tumour, generalised abdominal tenderness and pain with stercoraceous vomiting were the main symptoms. Enemata and opium were given, but operation was not deemed advisable. The patient died on the second day after admission.

(*b*) *Obstruction of small intestine from adhesion to mesentery—Contraction and kinking—Tuberculosis of mesenteric glands.*—The greatly dilated upper end of the small intestine is displayed by removal of its wall. This portion of the gut shows towards the mesentery various puckerings with prominent ridges. It ends below in an exceedingly narrowed piece of intestine, whose calibre at the narrowest part is only about 5 mm. This portion of intestine is firmly adherent to the mesentery for a distance of about 3·5 cm., and in addition to the narrowing there is a prominent projection of the wall, which diminishes the calibre still further. Immediately below the greatly narrowed part there is still some adhesion, and the intestine shows prominent ridges internally. Outside there is a group of enlarged mesenteric glands, and cretaceous masses were found amongst these.

James M., aged 14, presented a history of constipation, which began eleven days before death with acute pain in the right iliac region. Fæcal vomiting existed for four days before death. The child died a few hours after admission to Prof. George Buchanan's wards.

There was no tuberculosis of the lungs.

4. *Diseases of the Appendix Vermiformis.*

(*a*) *Small abscess in vermiform appendix.*—The proximal half of the appendix is dilated into an oval sac 3 cm. in diameter. It is closed at both extremities. At the proximal end it bulges into the caput cæcum through the dilated orifice, being closed in by a thin membranous wall. At the distal end the sac has also a continuous surface, and the distal half of the appendix, although normal in diameter, is solid.

The sac had the appearance of a cyst, but on incising it thick yellow pus mixed with mucus was found. Cultures of bacillus coli were obtained from the pus. Tubercle bacilli were not found.

Arch. M., aged 44, was affected with cancer of the œsophagus and phthisis pulmonalis. No symptoms referable to the lesion shown were noted during life.

(*b*) *Strangulation and rupture of vermiform appendix—Acute peritonitis.*—The specimen shows the cæcum, from the apex of which the vermiform appendix, measuring 9·5 cm. in length, springs. Originating at a point slightly above the level of the brim of the pelvis, the appendix for about 4·5 cm. of its length passes almost directly inwards on the pelvic wall. It then makes a sharp bend, and is continued almost vertically downwards in the remaining part of its course. At a distance of 3 cm. from its origin it is crossed by a well-formed band of connective tissue, evidently its own mesentery, which passes to the mesentery of the ileum. The band viewed *in situ* appeared sufficiently tight to strangulate the distal end of the appendix. Proximal to this band the appendix presented normal characters; while distal to the band it had a greenish-black colour, and was evidently sloughing.

A ragged triangular aperture, through which a piece of whalebone has been passed, is seen at a point 1·5 cm. from the tip, near the mesenteric border of the appendix. No concretions were found. There was acute generalised peritonitis, and bacillus coli and streptococci were found in the exudation. The coils of small intestine were markedly distended.

Daniel B., aged 8, was admitted to Prof. George Buchanan's wards with symptoms of acute general peritonitis of two days' duration. There was considerable abdominal distension. Persistent vomiting had been present for two days, and no motion had been passed for five days. The abdomen was opened on the day of admission by Dr. Beatson, but owing to the extremely collapsed state of the child no systematic search for the obstruction was undertaken. The child died a few hours after operation.

5. *Tubercular Ulceration of Intestine.*

(*a*) *Tuberculosis of intestine with necrosis and perforation.* —The ulcers, which are shown in four separate portions of the small intestine, have the usual transverse arrangement and prominent edges. None of the ulcers come up to the mesenteric attachment, which is represented by the edges of the pieces of intestine. In all the ulcers shown a brown slough is present on the floor, and in one of the pieces, which contains two ulcers, there is a perforation. Tubercles are visible under the peritoneum opposite all the ulcers. Fæcal matter had escaped into the peritoneal cavity. There was also tubercular ulceration of the ileo-cæcal valve, and concretions were present in the vermiform appendix (see preparation *c*).

Anthony G., aged 37, was under treatment in Dr. Finlayson's wards for phthisis pulmonalis. Nine hours before death severe pain was complained of in the left iliac region.

(*b*) *Solitary tubercular ulcer of ileum—Marked obstruction —Great dilatation and pouching of bowel with hypertrophy.* —The ileum has been opened, and an ulcerated surface measuring 3 cm. from above downwards and about the same from side to side is exposed. It involves the entire lumen of the bowel, is fairly defined at its edges, and is bridged over at its upper part by a tolerably stout band of tissue, under which a piece of whalebone is inserted. This greatly narrowed portion, which corresponds with a point 2 metres from the pyloric ring, just admitted in the fresh state an ordinary lead pencil. Above the obstruction the bowel for a distance of over 1 metre was remarkably dilated and hypertrophied, as shown in the specimen and in the section of bowel hung separately. It had a maximum diameter of 9·5 cm., and its wall an average thickness of 4 mm. Immediately above the obstruction there is, in addition, a large localised bulging or sacculation. Beneath the obstruction the average diameter was found to be 3 cm., and the average thickness of the intestinal wall less than 2 mm.

The mesenteric glands were markedly enlarged; a few were caseating, a few were cretaceous. On microscopic examination both the ulcer and one of the glands showed the characteristic appearances of tuberculosis. No evidence of tuberculosis was found elsewhere in the abdomen.

Jessie B., aged 12, for four years before death suffered at intervals from attacks of severe colicky pains in the abdomen, with vomiting, and was on several occasions in the medical and surgical wards of the Sick Children's Hospital, under the care of Dr. Gemmell and Dr. Dalziel. The attacks latterly were associated with abdominal tenderness and swelling. Marked peristalsis, borborygmus, and succussion were features in the case.

(*c*) *Bulky concretions in vermiform appendix—Tuberculosis of ileo-cæcal valve and cæcum.*—The caput cæcum is here laid open, and there is extensive ulceration of the valve extending to the wall of the cæcum. Isolated crater-shaped ulcers are also present. The orifice of the vermiform appendix is narrowed but not obstructed. The preparation shows, by section of its walls, bulky concretions of a brown colour, in great part filling the calibre of appendix. There are three of these concretions—the largest, in the proximal part, measuring 2·5 cm.; the middle one measuring about 1 cm.; and the distal one, extending nearly to the tip, having a length of about 1·5 cm. These have the characters of fæcal concretions.

5. *Simple and Malignant Tumours of the Intestine.*

(*a*) *Specimens of pedunculated appendices epiploicæ.*—The first specimen shows three appendices epiploicæ. The central one, which was swollen and markedly hyperæmic, is attached by a slender pedicle to the intestinal. The pedicle is obviously twisted several times.

The second specimen, removed from the body of a man who died of acute pneumonia, is from the upper part of the sigmoid flexure. The appendix epiploica is in the form of a firm, flattened, ovoid mass, the size of a haricot bean. It measures almost 2 cm. in diameter, and hangs free from the intestinal wall by a thread-like peduncle almost 1·5 cm. in length.

The specimens illustrate the mode in which these "pedunculated lipomata" of the colon may separate, as well as the possible source of some of the "free bodies" met with in the abdominal and pelvic cavities, and in hernial sacs.

(*b*) *Polypoid submucous lipoma of large intestine.*—A portion of ascending colon with attached polypus is shown. The base of the polypus was 15·5 cm. above the ileo-cæcal valve. The mass is seen to have a broad attachment transverse to the gut, forming an almost complete annular fold. This is succeeded by an elongated narrow neck, which at its narrowest is 7 mm. in diameter. At the extremity of the neck there is a bulbous head 4 cm. in length, and 16 mm. in diameter at its broadest part. The total length from the base of attachment to the summit is 9·5 cm. The polypus in the fresh state showed a deep blue-black colour.

Microscopic examination of the bulbous end shows lobules of adipose tissue, which present considerable variety in the size of the cells. There is also an excess of fibrous tissue between the lobules. A thick layer of epithelium with a series of short tubular glands covers the surface of the mass. Fine black granules are present in the mucous and submucous tissue. These probably have resulted from the action of the H_2S in the intestinal canal on altered blood in the tissues.

John M., aged 66, died from cancer of the œsophagus and cancer of the kidney (probably from suprarenal inclusion). There were no known symptoms of intestinal origin, but, in addition to the lesions shown, numerous small polypi and many small false diverticula were found in the large intestine.

(*c*) *Cylinder-celled epithelioma of ascending colon in early stage.*—The lesion is in the form of a nearly circular ulcer about 2·5 cm. in diameter. The edges rise abruptly from the mucous membrane, and are smooth. The smooth edges abruptly give place to a granular ulcerated surface, which has the naked eye and microscopic characters of the cylinder-celled epithelioma.

Viewed from the serous surface there is seen to be an infiltration corresponding with the centre of the lesion, producing a somewhat lobulated projection about 1·3 cm. in diameter. It was situated about midway between the anterior and posterior longitudinal bands, 8 cm. above the aperture of the vermiform appendix.

Samuel H., aged 69, died in consequence of gangrene of the lung. No symptoms of the lesion shown were known to exist during life.

(*d*) *Cylinder-celled epithelioma of sigmoid flexure.*—The growth, measuring 1·5 cm. in the long axis of the bowel, is seen to involve the entire circumference, to infiltrate the wall, and to pout into the lumen of the gut, causing marked obstruction. Around the annular constriction, as viewed from without, there is a grouping of the appendices epiploicæ. There is distinct ulceration in the upper part of the mass. The new growth has the naked eye characters and microscopic structure of the cylinder-celled epithelioma.

Above the constriction the bowel was distended and hypertrophied, and contained a large amount of semi-fluid fæces; beneath the obstruction it was collapsed. No secondary tumours were found.

Arch. E., aged 63, was admitted to Dr. Patterson's wards with symptoms of intestinal obstruction. Neither motion nor flatus had been passed for fourteen days prior to admission. Vomiting commenced eleven days before admission, and became persistent. The abdomen was markedly distended. The distended bowel was punctured and an artificial anus made. The patient died the morning after the operation.

CASE OF MYXŒDEMA COMPLICATED WITH CARDIAC DISEASE, WITH AN ACCOUNT OF THE *POST-MORTEM* EXAMINATION.[1]

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THE patient, Wm. C., aged 54 years, was admitted to Dr. Middleton's wards in the Royal Infirmary, Glasgow, on 28th June, 1895, and it is with his kind permission that I publish an account of the case.

I saw the patient occasionally before his admission while attending his son, who died of phthisis pulmonalis, and was so struck by the appearance of the father being due to myxœdema that I advised him to seek admission to the hospital. The case turned out rather an unusual one, being complicated with organic heart disease, and has proved of some interest in the light of the *post-mortem* examination.

The patient was a little spare man weighing 8 st. 7 lb., having all the characteristic appearance of one affected with myxœdema. The expression, as may be judged from Fig. 1, reproduced from a photograph (p. 96), was "apathetic" or "stolid;" the face pale, with a slight flush on each cheek; the eyelids œdematous, and the margins affected with "blepharitis;" the beard bristly and thinly set; the teeth few in number, and loose; the soft palate œdematous; the hair of the scalp dry, and the scalp itself scurfy; the skin over the whole body dry and harsh, especially on the hands and forearms, where it was much wrinkled. This is well seen in Fig. 2 (p. 97). True œdema, though very slight in extent, was detected over the ribs and sternum, sometimes also in the feet; but in this latter situation it soon disappeared with rest in bed. The character of the voice was peculiar, being slow, deliberate, and monotonous, at the same time weak and husky. The thyroid gland could not be felt with certainty.

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[1] **Read at a meeting of the Glasgow Medico-Chirurgical Society on 23rd April, 1897.**

These signs of myxœdema were associated with failure of memory, marked slowness in thought and action, and with the placid temperament so characteristic of this disease. Other well recognised features of the disease were found in the subnormal temperature and in the condition of the blood. During the first ten days after admission to the hospital, when the patient was under no medicinal treatment, the temperature remained well below normal, the highest temperature recorded being 97·8° F. Examination of the blood revealed a deficiency both in respect to hæmoglobin and the red blood corpuscles. These were present to the extent only of 52 per cent and 64 per cent respectively.

Dr. Fullerton kindly furnished a detailed report on the condition of the throat, and Dr. Rowan a similar report on the condition of the eyes.

Without giving these two reports in full, it may be stated that Dr. Fullerton found, besides a peculiar waxy and œdematous appearance of the mucous membrane of the mouth, soft palate, and posterior wall of the pharynx, an unusual condition of the epiglottis. It lay horizontally backwards, and was compressed on itself from side to side. In this position it prevented a proper view of the anterior part of the larynx. The posterior part, however, could be well seen, and it presented a strikingly pale appearance. The mucous membrane around the arytenoid cartilages he found appreciably thickened, and having the peculiar pale waxy and œdematous character already noticed in the soft palate and pharynx. The movements of the vocal cords were normal.

The chief abnormalities noted in Dr. Rowan's report on the condition of the eyes were these:—While the colour-fields in both eyes were normal, in the right there was some confusion as to small coloured discs in the centre, possibly due to the influence of tobacco. Both eyes on ophthalmoscopic examination were found to be hypermetropic. Both discs were pale, and the edges indistinct. This was associated with a granular condition of the pigment in their neighbourhood. This disturbance extended for a short distance from the edge of the discs, but mostly in an upward direction. The vessels were normal. The eyesight, the patient stated, had been defective for many years.

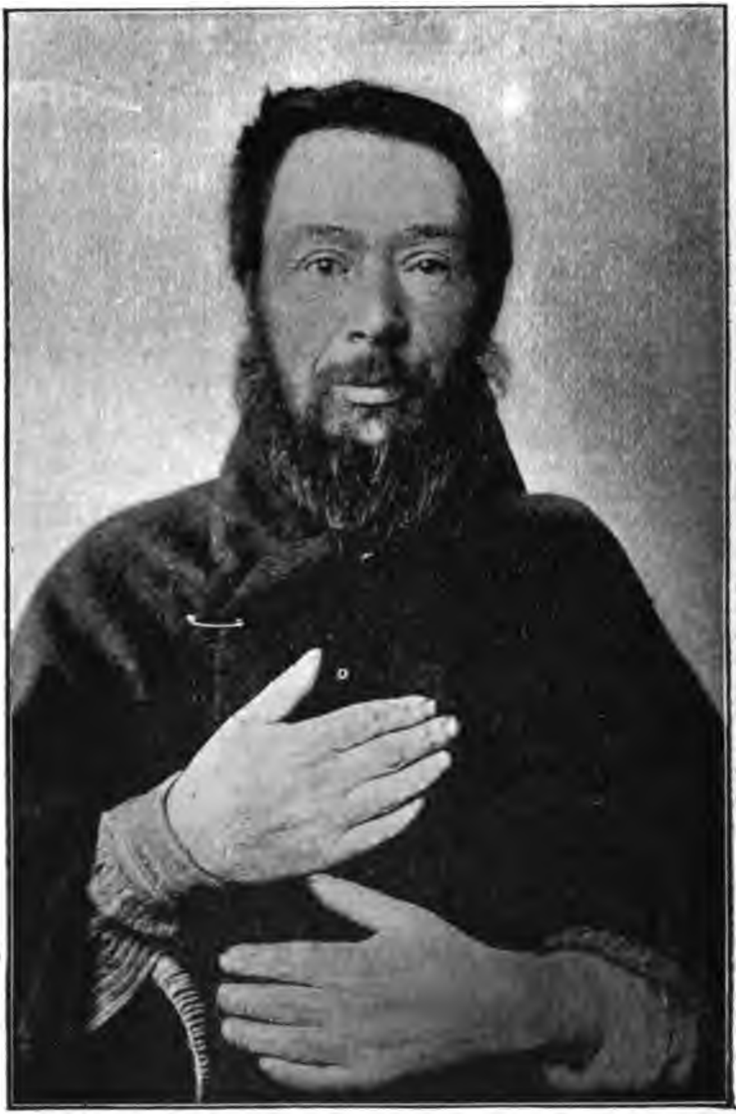

Fig. 1.

The sense of hearing was not so acute on the right side as it was on the left; but the examination by the auroscope was

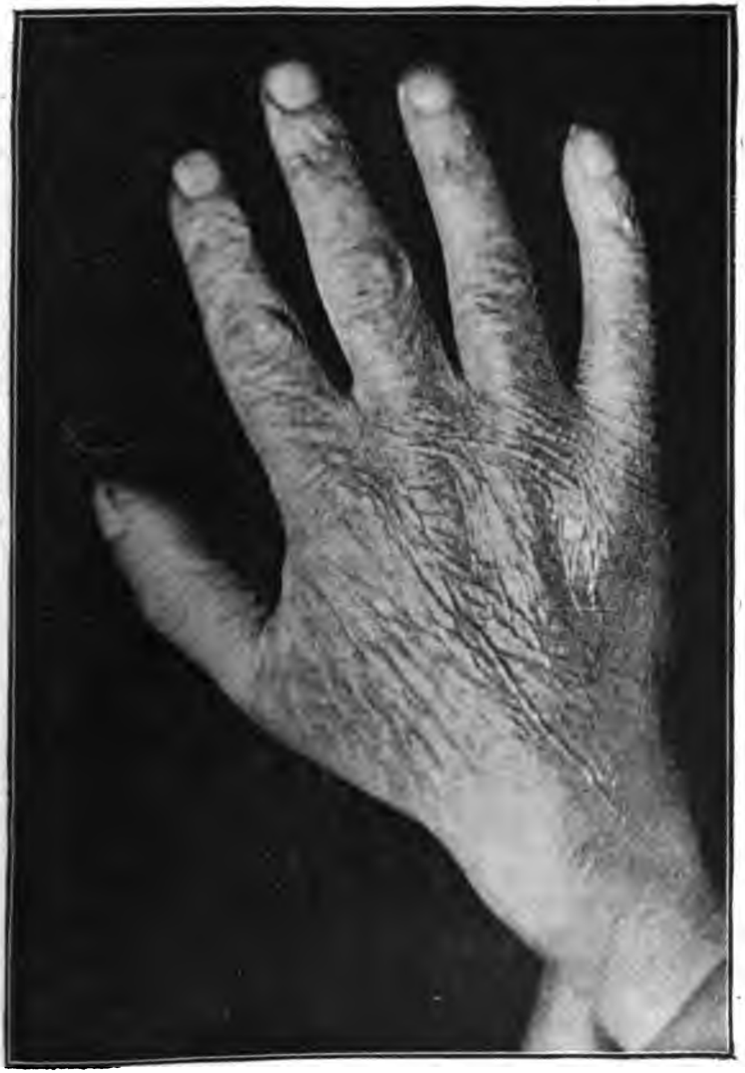

Fig. 2.

negative on account of the presence at the time of examination of an unnatural amount of cerumen.

The senses of taste and smell were normal. Common sensation, senses of pain and temperature were normal, so also were the patellar tendon and plantar reflexes.

The above facts have been grouped together with special reference to the diagnosis of myxœdema, the origin of which condition, judging from the imperfect history given by the patient and the examination of certain photographs in his possession, must have been within ten years previous to his admission into the hospital.

There is, however, another element in the case which will now be briefly considered. While the patient complained on admission of general weakness and lassitude—a usual complaint of those affected with myxœdema—he complained also of another very definite symptom in the form of breathlessness on the slightest exertion. This was associated with a history of true œdema of feet and of bronchitis, the former of much earlier origin than the latter.

On further examination of the patient evidence of a distinct cardiac lesion, probably of rheumatic origin, was detected. The cardiac dulness was not enlarged, measuring 3½ in. transversely. The apex beat was in the fifth intercostal space in the nipple line. In the region of the apex on auscultation, however, a distinct double murmur was heard, V.S. and V.D. in rhythm. Both elements were soft, blowing, and rather superficial in quality. The V.D. portion was separated from the first sound by a short pause, though, as stated below, it should be noted that Dr. Middleton on one occasion at least suggested the presence of an A.S. murmur, but of this there was only a suspicion, and only at times. On departing from the apex these murmurs (V.S. and V.D.) became extremely faint. At the foot of the sternum the V.D. could just be heard. There was no murmur at the base of the heart. The second sound was not unduly accentuated at either the aortic or the pulmonic area.

There was no support given by the character of the pulse to the view that the V.D. was of aortic origin. The pulse was regular, numbering on an average only 56 per minute, while the sphygmograms showed rather an increase in arterial tension than anything indicating aortic regurgitation.

The examination of the lungs revealed nothing abnormal beyond the presence of a few fine moist râles at both bases. Associated with this there was slight cough and a little thin mucous expectoration.

The examination of the abdomen presented nothing abnormal beyond slight tympanitic distension. The liver was not enlarged. The bowels were constipated.

The urine on admission was acid, muddy, amber in colour, having a specific gravity of 1024. It contained a trace of albumen, but no sugar. The average quantity passed during first ten days after admission was 20 oz., while the average amount of urea daily excreted, estimated on five occasions, was 252·6 grains.

As it is impossible in the space at my disposal to give a detailed account of the progress and treatment of the case, a short statement will be made of the facts bearing specially on the treatment by means of compressed thyroid gland.

This treatment was begun on 8th July, one tabloid (B. W. & Co.) containing 5 grains of compressed thyroid gland being administered daily. This was continued without any untoward symptoms appearing until the 15th July, when two were given daily. On that day, however, the temperature rose a little higher than usual—viz., to 98·8° F.—and on the two following evenings to 99·4° F. The patient felt rather ill, and the thyroid was stopped on the 17th July.

Examination of the lungs revealed signs of consolidation at the left base. The temperature continued elevated for ten days, but never higher than that noted above, when it again subsided to subnormal under the influence of stimulant expectorants and cardiac tonics. The condition at the base of the left lung, however, never entirely cleared up.

On 1st August two tabloids were again given daily, but this had only been continued until 7th August, when the temperature rose to 99° F., and the patient complained of breathlessness and sense of oppression over the breast. Treatment by thyroid was therefore suspended, and cardiac stimulants and tonics prescribed.

It was at this time that Dr. Middleton indicated a strong suspicion of the presence of an A.S. murmur. There was also noted by him marked irregularity of the heart's action and reduplication of the second sound. He also detected, in the left lateral region, friction associated with dulness and moist râle at the base of left lung; moist râle was heard also at the base of right lung.

The symptoms of which the patient at this time complained gradually disappeared, and after the 9th August the temperature again became subnormal, and remained uninterruptedly so until the 26th. The condition of the heart and lungs remained practically the same.

Four days previous to above date, that is on 22nd August, the thyroid was again administered in the same doses as on last occasion, and with practically the same result. It was therefore stopped a week later, and general treatment in the form of stimulants and cardiac tonics adopted.

Believing that the thyroid had some influence in determining these febrile disturbances, on two subsequent occasions, viz., on 14th September and 21st October, small doses of one half tabloid were given daily.

On the first of these occasions, five days after the beginning of the administration, the temperature rose to 101·4° F., the highest that it ever was during the whole time of his illness. On the second of these occasions the temperature did not become much elevated, but the patient felt usually worse after them, and so they were stopped three days later.

Such was the experience of the administration of the thyroid. Whether in all cases the elevated temperatures and the cardiac and respiratory distress were due to the action of the thyroid it is difficult to say, because there was on the first occasion a distinct inflammatory condition at the base of the left lung, and on other occasions, particularly towards the end of September when he was suffering from a subacute attack of rheumatism, the temperatures were elevated and yet no thyroid was being administered.

With regard to other effects possibly produced by the administration of the thyroid, the following facts may be noted. Comparison of his weight at the time of admission and on 14th August showed a loss of 9 lb. He became much thinner, and the œdematous condition of the eyelids became less apparent. The skin of hands and arms became more soft and pliable, while slight desquamation could be detected in some parts of the body.

The daily quantity of urine and the urea it contained increased, as the following figures will show:—Between 1st and 5th July, inclusive, no thyroid was administered, and the average daily quantity of urine passed was 20 oz. and the average daily amount of urea excreted 252½ grs. Between 8th and 13th July, inclusive, the patient was having one tabloid daily. The average daily quantity was then 30⅓ oz., and the urea 322½ grs. Again, between 8th and 21st August, inclusive, the patient was not having any thyroid, and the average daily quantity of urine excreted was 26⅓ oz., and the urea 292½ grs. Between 22nd and 29th August, inclusive, two tabloids were given daily, and during that period the daily quantity of urine increased to 35½ oz., and the urea to 340 grs.

Towards the end of October the patient complained much of flatulent distension and tenderness in hepatic region. The temperatures on the 28th and 29th rose to 99·6° F. and 100·4° F. respectively, while blood and tube-casts as well as albumen were found in the urine.

During November the patient gradually got worse. By the 22nd orthopnœa and sleeplessness became extreme, and for these latter symptoms such remedies as paraldehyde, sulphonal, chloral, and chlorodyne were tried at intervals with only temporary relief.

On 10th December the heart seemed to have enlarged, as the cardiac dulness measured then 5½ inches as compared with 3½ inches on admission. The V.S. murmur was then audible but not the V.D. A V.S. murmur in the tricuspid area was noted for the first time. The second sound at the pulmonic area was accentuated. The patient gradually became weaker, and died on 17th December, 1895.

The *post-mortem* examination was conducted by Dr. Charles Workman on 19th December. The following facts are taken from the Pathological Journal:—

The body was well developed, but somewhat emaciated. Œdema was present in both the hands and feet.

On opening the thorax the surfaces of the pericardium were adherent from old pericarditis. The left lung was also very adherent to the chest wall; also the right, but to a much less extent.

The heart weighed 18 oz. The aortic valve was incompetent, while the pulmonic was competent. On opening the heart, the aortic cusps were found to be thickened and two of them adhering together. The mitral valve was almost closed, admitting only the point of the little finger. It was conical in shape, and terminated in a slit surrounded by a thickened margin. The tricuspid valve admitted three fingers easily. The cardiac muscle was very pale and soft. The left ventricle was somewhat dilated, and the whole organ was slightly larger than normal.

The right lung weighed 32 oz., and was voluminous. Its borders were very emphysematous, and the posterior part was œdematous. The left lung weighed 30 oz., was much smaller in size, and was also œdematous. In its lower lobe there was an area of consolidation.

The œsophagus was somewhat congested, but otherwise presented a healthy appearance.

There was marked injection and pigmentation in the follicles at the root of the tongue and in the tonsils. The epiglottis stood out very prominently, and was compressed somewhat from side to side, being curved, with the concavity directed backwards. The mucous membrane, especially over the arytenoid cartilages, appeared slightly thickened and translucent. The larynx otherwise appeared healthy. The trachea was normal in appearance.

The thyroid gland appeared small, and on section was of a fibrous character.

The spleen weighed 3½ oz., was normal in size, of firm consistence, but moderately congested.

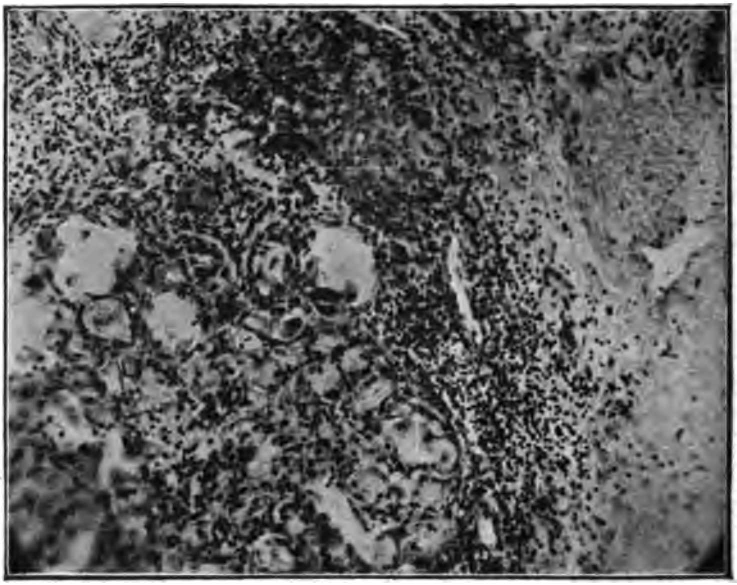

Fig. 3.

The liver was closely adherent to the diaphragm, and when removed its upper surface was covered to a considerable extent with fibrinous exudation. It weighed 51 oz., was of firm consistence, and to the naked eye appeared to be in a condition of commencing cirrhosis. It was not enlarged, nor was it markedly congested. The gall-bladder contained fluid bile, and was of fair size.

The pancreas presented quite a healthy appearance, except that it was somewhat green in colour, probably due to bile staining.

The kidneys together weighed 12 oz.; they were lobulated in form, and somewhat congested. The cortex was perhaps rather thinner than usual, but the capsule was not markedly adherent. The atrophy of the cortex was probably due to a moderate interstitial nephritis. In the pyramids were a few white spots resembling miliary tubercles.

The brain weighed 46 oz. The membrane at the base presented quite a healthy appearance. Over the vertex the capillaries were perhaps a little congested. On careful examination throughout the brain presented a healthy appearance."

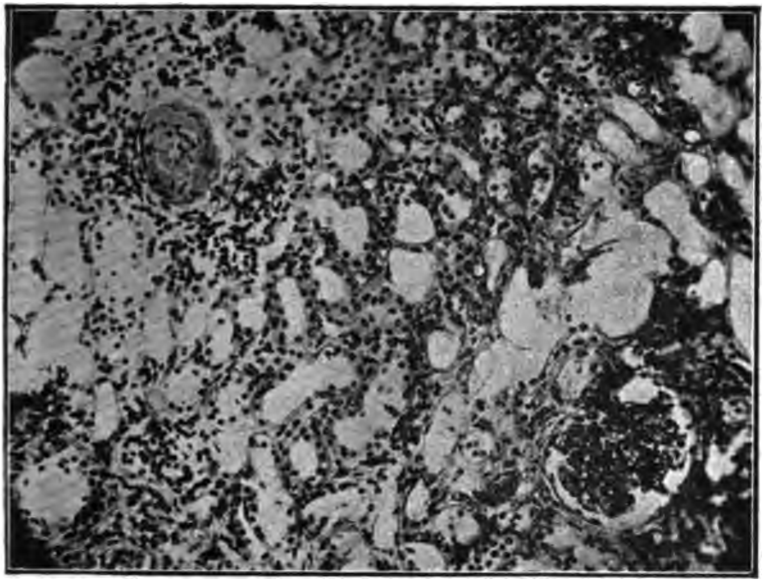

FIG. 4.

The further examination of the organs was carried out by myself. The thyroid gland removed from the adjoining parts was found to weigh 83 grs., as compared with the normal weight, usually estimated at from 1 to 2 oz. Both lobes were of the usual shape. The left measured in its longest diameter 1¾ inch, and in its broadest diameter five-eighths of an inch. The normal lobe is estimated at about 2 inches long and 1¼ inch broad. The right lobe measured in length and in breadth much the same as the left. The lower border of each lobe extended down to the fourth tracheal cartilage; normally it extends as low as the fifth or sixth. The isthmus in the middle line was of normal breadth, half an inch. Sections of both lobes and isthmus were cut and examined microscopically, when it was found that the normal structure of the gland had entirely disappeared. Instead of finding numerous closed vesicles lined by epithelium and held together by areolar tissue, it was found that the gland was practically one mass of fibrous tissue. In unstained specimens the individual fibres of this tissue appeared quite translucent. Staining with logwood brought out the nuclei present, but they were not numerous. There was also evident in these logwood-stained specimens, and still more in those stained with picro-carmine, what has been described by Ord[1] as "cell-crowded" patches. Most of these areas are seen to consist simply of an aggregation of small round cells in the midst of fibrous tissue, but in a few the remains of the normal thyroid vesicles could be detected. They were small, misshapen, and devoid of their proper epithelial lining, while within were irregular-shaped cells of various sizes.

Fig. 3, reproduced from a micro-photograph (p. 102) taken by Dr. Leslie Buchanan, shows very well the fibrous tissue, the numerous round cells, and the remains of the thyroid vesicles. In other parts of the sections there could be seen vesicular elements, altered in the manner above described, but with few round cells in the neighbourhood. Throughout the fibrous tissue there could be seen a fair supply of vessels, the larger of which showed considerable thickening of the middle and external coats, a fact already pointed out by Ord and subsequent observers. In this case, however, one has to remember the possibility of vascular changes associated with the cardiac condition which might occur independently of myxœdema.

Ord further refers to a pathological change "in the muscular tissues, particularly in the heart," where "the same sort of excess of cement, with induced attenuation of the muscular elements, is clearly to be recognised," comparable tó the fibrous tissue formation in the thyroid, with the annihilation of the vesicular elements. In this case the cardiac muscle was carefully examined microscopically, but no such change as he describes nor any other abnormal condition was observed.

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[1] William M. Ord, M.D. Lond., F.R.C.P., "On myxœdema, a term proposed to be applied to an essential condition in the 'cretinoid' affection occasionally observed in middle-aged women," *Medico-Chirurgical Transactions*, London, 1878, vol. lxi, p. 57.

In the liver the only pathological change detected by the microscope was a slight degree of cell infiltration in the capsule of Glisson. This corresponded with the naked eye appearance of the liver noted by Dr. Workman as indicating the beginning of cirrhosis.

In the kidneys a peculiar pathological change, affecting the Malpighian corpuscles, described by Ord, was also observed. The capsule of these bodies in may instances appeared greatly thickened, encroaching upon and tightly embracing the glomerulus within. On examining the thickened capsule with the high power, the fibres of which it was composed appeared to be thick and translucent, staining uniformly. Only a few nuclei could be detected. The glomerulus itself in many had apparently undergone a similar change, forming with the capsule one fibrous mass. In some this change seemed to have affected the glomerulus first, the capsule only secondarily and to a less extent. In these cases the tuft had become affected from the side to which it was anchored by the vessels. The process gradually extending inwards had ultimately involved the whole glomerulus.

Fig. 4, also reproduced from a micro-photograph (p. 103) by Dr. Leslie Buchanan, shows a normal Malpighian corpuscle, and another which has been transformed into fibrous tissue. There is also to be seen, in the neighbourhood of these altered Malpighian corpuscles, proliferation of round cells. In the microscopic sections there was also evidence in some places of some degree of interstitial nephritis.

The skin from the back of the hand was also examined, and it was found that there was an abnormal proliferation of cells in the corium, especially along the course of the capillary vessels. With regard to the sudoriparous glands, these were not atrophied, but their epithelium was much swollen, indicating a condition which might possibly have interfered with their function, and thus explained the dry condition of the skin.

I have to acknowledge the assistance of Dr. R. S. Dick and Dr. R. H. Howat, late house physicians in the Royal Infirmary, who reported and took notes of the case.

CURRENT TOPICS.

Proposed Memorial to the Brothers William and John Hunter.—At the end of June last, a public meeting, convened by the Lord Provost, Sheriff Berry, Principal Caird, and Dr. Bruce Goff, President of the Faculty of Physicians and Surgeons, to consider the proposal originated by the late Dr. George Mather, to erect in Glasgow an artistic memorial to the brothers Hunter, was held in the Municipal Buildings. There was a good attendance, and Lord Provost Richmond explained from the chair the object of the meeting, and commended it to the favourable consideration of the citizens. Dr. Bruce Goff stated that the proposal had, on the motion of Dr. George Mather, been first of all inaugurated at the Faculty of Physicians and Surgeons, and that the Faculty had been fortunate in obtaining the cordial co-operation of the Town Council and the University. The public meeting was the outcome of the united action of these three bodies. Dr. Freeland Fergus pointed out that a sum of about £3,000 would be necessary for the erection of a suitable memorial, and intimated that Mrs. Mather had already collected a sum of £850 to head the subscription list. After a full and very favourable discussion of the project, the gentlemen present were constituted an executive committee with power to add to their number. The Lord Provost was elected chairman, Professor Cleland, vice-chairman; Dr. David Murray, honorary treasurer; and Dr. Freeland Fergus, honorary secretary. We most cordially commend the proposal to our readers. The brothers were born at the farm of Long Calderwood, in the parish of East Kilbride, seven or eight miles from Glasgow. William received his education at the University of Glasgow, and John spent two or three years of his youth in the city. When we consider how much medicine, science, and the fine arts owe to the genius and labours of these immortal brothers, and how greatly Glasgow has been honoured in being chosen as the resting place of William's grand museum, we cannot help feeling that the citizens of the second city of the empire will eagerly seize the opportunity now offered them, and that ere long a worthy memorial of the Hunters will be erected in our midst.

Glasgow Eastern Medical Society.—A special meeting of this Society was held on 23rd June, 1897—Dr. Wm. Findlay, Vice-President, in the chair. The meeting was called to consider certain points about the "Public Health (Scotland) Bill" (at present before Parliament) of great interest to the profession at large. Dr. M'Vail, Medical Officer of Health for Dumbartonshire, addressed the members, going into the points at some length. The Bill, in the clauses hereafter mentioned, wishes to give to sanitary inspectors the same powers as to medical officers of health—to certify that which is dangerous or injurious to health—thus giving to men who have no special training (or hardly any), but have likely, before becoming sanitary inspectors, been common tradesmen, the same power and authority as men of whom is demanded a course of training both in general medicine and in public health. The meeting held that this would be distinctly derogatory to the profession, and not only so, but would likely often prove unnecessarily hurtful to the interests of owners of property. A sanitary inspector's work and duty was to find and point out defects, but as regards whether such were dangerous or injurious to health, that should be left to the judgment of a trained authority. The following resolutions were agreed to by the meeting:—

"(1) That this Society views with indignation and dismay the provisions contained in Clauses 22, 36, and 84 of the Public Health (Scotland) Bill; whereby, in Clauses 22 and 36, sanitary inspectors are to be statutorily empowered, equally with medical officers of health, to certify regarding danger or injury to health; and whereby, in Clause 84, the certificate of a sanitary inspector is to be of equal effect with that of any two medical practitioners.

"(2) That the Bill contains many provisions, excellent in themselves, and yet requiring, in the course of their enforcement, such discrimination and discretion as are likely to result only from a combination of general education with special training in all that relates to the public health; and that, therefore, in every district the qualified medical officer of health should be made definitely responsible to the local authority for the proper administration of the Bill when it becomes law.

"(3) That it is important, alike in the interests of the general public and of the medical profession, that Clauses 22, 36, and 84 should be amended by deletion of the sanitary inspector as a certifying authority, and that in Clause 15 effect should be given to the views set forth in the second resolution.

"(4) That a copy of these resolutions be sent to the Secretary for Scotland, the Lord Advocate, and all Members of Parliament for Scotland.

"(5) That a petition embodying the resolutions be presented to both Houses of Parliament."

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1896-97.

Meeting XIII.—23rd April, 1897.

Professor M'Call Anderson, M.D., *in the Chair.*

I.—NOTES ON THE PARASITE OF MALARIA.[1]

By Dr. J. H. Teacher.

From its wide distribution, and the serious effects which it produces, ague has always been regarded as one of the greatest scourges of the human race, and its nature and cause have been the subject of much speculation. In 1880 Laveran discovered the organism which has now been recognised, practically universally, as the cause of malaria in all its extremely varied manifestations. Since that date the parasite has received a great deal of attention, and the main features of its life cycle within the body and their relation to the clinical and pathological phenomena of the disease are pretty well worked out. As to its life without the body we know nothing, all attempts at artificial culture having been failures, and no one having been able to distinguish it in its free state.

The parasite belongs to the order protozoa. The exact zoological position, and the question whether the organisms causing all the different forms of malarial disease belong to a single species whose evolution is variable, or to several different species, are still *sub judice.* The latter view is the one more generally held, and I agree with it.

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[1] These notes were read in connection with a demonstration of malarial blood preparations obtained by Dr. Teacher during a recent residence in the south of Spain.

To quote from Mannaberg's manual—"The malarial parasites are unicellular living organisms, which in their early forms show a more or less lively amœboid movement." This becomes less active as they grow older, and is finally lost altogether.

"As a rule, the immature parasites have a flattened disc-like form, which, according to whether it is at rest or in movement, may have a circular, oval, smooth-edged, or completely irregular shape."

"The mature parasites are globular or sometimes flattened." The predominance of the flat form is probably due to the relation of the parasite to the red corpuscle, which has a flattened form.

As to the relation of the parasite to the red corpuscles, the immature forms for a time swim free in the blood-stream, then become attached to and lie on the corpuscles, more or less embedded in their substance. The mature ones are actually inside the corpuscles, and they can occasionally be seen to burst out of them with a suddenness which is very surprising to the observer.

Reproduction is by simple segmentation, or spore formation. The parasites are as a rule isolated, which makes them rather difficult to find.

All the forms of the parasite live on the substance of the corpuscle which they inhabit. As a product of digestion of the hæmoglobin are formed granules of brown pigment (melanin), which accumulate in the protoplasm of the animal, and are later deposited in various parts of the body. These facts explain two of the leading features of ague—the anæmia which is due to the actual destruction of red cells going on as long as there is a parasite alive and active in the body, and the pigmentation of the internal organs which you may observe in the section of brain shown to-night.

The third leading feature of the disease, the most striking manifestation of all, the periodic paroxysms of ague, is related to the process of reproduction. The animal completes its life cycle in a certain time, which is different in the different species. It is completed by the act of sporulation, and the commencement of the paroxysm coincides more or less exactly with the liberation of the spores from the parent into the blood-stream.

The parasite in the fresh state appears as a clear body, usually containing pigment, enclosed in a red corpuscle.

Practically all except the youngest forms contain granules of the above mentioned pigment, which are, as a rule, in active motion.

Certain of the full-grown parasites show another very striking form of movement—viz., the protrusion of flagella, which wave vigorously to and fro in the blood. The flagella appear some time after the shedding of the blood, and are supposed to have to do with enabling the animal to change from the parasitic to the free state.

The parasite is, as a rule, more easily found in the fresh state, and is then more interesting from presenting the phenomena of life. On the other hand, staining is necessary to differentiate its structures, and also for the certain recognition of some of the small forms. In the specimens shown here hæmalum is the stain used. By its aid we are able to see that each parasite is composed of a nucleolus which stains well, a nucleus which remains unstained, and a protoplasmic mantle which stains slightly. In only one form—certain of the crescents—is there any enclosing membrane visible.

Malarial fevers may be classed as regular and irregular, and the parasites divide naturally into two corresponding main groups:—

(1) Parasites which produce the regular fevers—tertian, quartan, and certain quotidians. These fevers are comparatively mild, yield readily to quinine, and tend to run a regular course free from grave complications. So regular are they, and so invariable are their relations to the development of the parasites, that the course of events in a given case can be accurately foretold from simple microscopic examination of a drop of blood from the finger.

(2) Parasites which produce irregular fevers, tending to grave, even fatal complications, yielding but slowly to quinine, and very prone to recurrence. They are distinguished by the production of a special form known as the crescentic body. The fevers of this group are commonly alluded to as the pernicious or malignant fevers.

To turn now to the specimens. In the first class are the tertian and quartan parasites. They are illustrated by three specimens. Of these, the one which best serves to illustrate the life cycle of a malarial parasite is the tertian specimen. The tertian parasite completes its life cycle in the blood in forty-eight hours. It often happens that there are present two generations which come to maturity alternately, at intervals of twenty-four hours, producing a quotidian ague of tertian origin. Three generations of quartan can similarly produce a quotidian fever. This is the manner in which all quotidians except those of the irregular class are produced.

The specimen was taken from a case of double tertian ague about ten minutes before the onset of the shivering, and it shows representatives of four stages of the parasite in one field.

It is a distinctive feature of the tertian parasite that the infested corpuscles are enlarged and pale. It is a point of considerable service in searching for the parasite, the enlarged corpuscle catching the eye readily. The parasites in the field are a sporulating body with central mass of pigment and fourteen spores around it, enclosed in a thin rind of pale corpuscular tissue. One of the spores is already being detached. Beside the sporulating body is another enlarged corpuscle in which is a young animal, the progeny of a sporulator which has already broken up, and whose spores have already found hosts. It shows nicely the deep blue nucleolus, clear unstained nucleus, and pale blue protoplasmic mantle. Lower down is a large parasite almost filling a corpuscle—one of the first generation which has not gone on to sporulation, a so-called sterile body—and beside it is a half-grown parasite of the intermediate generation, which would have reached maturity and produced another paroxysm in about twenty-four hours.

The life cycle which the specimen illustrates is as follows: —The sporulating body breaks up and the young spores are set free in the blood, giving rise, in what manner we do not exactly know, to a paroxysm. They swim about free for a time, and then attach themselves to corpuscles and commence to grow. At this stage they appear in the fresh state as little clear spaces in the corpuscle, with a rapid amœboid movement and a bright refractive point, which is the nucleolus. A few hours later granules of pigment, the product of digestion, appear. In twenty-four hours the half-grown stage is reached. The parasite fills about half of the corpuscle; its shape, in consequence of the amœboid movements, is often very fantastic; and it contains numerous granules of fine pigment, which are in motion. In thirty-six hours from the start the parasite is full-grown, and the changes leading to sporulation begin.

The pigment loses its active movement and begins to draw to the centre, and in the stained specimen the nucleolus is found to have disappeared, the chromatin having become diffused throughout the parasite. A few hours later several blue blotches would be seen, the nucleoli of the future spores.

Gradually the spores become quite distinct, and finally the corpuscle bursts and they are set free.

Sporulation—*i.e.*, breaking-up of the sporulators—begins about three hours before the onset of the rigor, and may continue for several hours after it. Only a small proportion of the parasites sporulate, the rest of the generation remaining as sterile bodies which escape from the corpuscles and become free. It is this last form which shows flagella. Sporulation in the tertian and quartan commonly occurs in the peripheral blood-streams.

The changes in the other species are similar. In the quartan they occupy seventy-two hours.

The parasite of the quartan differs from the tertian in being much less active in its movements. The pigment is coarser, and the corpuscle is not enlarged. The spores are larger and fewer in number—8 to 10; a sporulating and a two-thirds grown parasite are shown.

Of the second group, the malignant parasites, three species seem to be well recognised—pigmented quotidian, unpigmented quotidian, and malignant tertian. This division is probably only provisional. They are all characterised by their small size; by the fact that sporulation occurs in the internal organs, so that this phase is almost never found in the peripheral blood, and has to be obtained by puncture of the spleen, or *post-mortem*. The size of the full-grown form is only about one-third to one-half that of the red corpuscle. The spores are small, and only four or five in number. They all produce crescents, which in all forms are pigmented. These bodies resist quinine very strongly, persisting in the blood for weeks in spite of large doses of it. On the slide they turn into round bodies which project flagella, the supposed significance of which has already been mentioned. Their appearance indicates gravity of the affection. The fevers of this class tend to recur time after time. The fever is irregular or continuous, and is attended by symptoms of extreme gravity—profound exhaustion and anæmia, coma, and frequently a fatal result. Three specimens are shown, exhibiting (1) the small immature form from the finger blood, very similar to the tertian spores; (2) a crescent; and (3) a section of brain from a case of malignant ague in Sierra Leone, prepared from tissues given me by Dr. Thin, of London. It shows the small blood-vessels of the cortex filled with corpuscles, most of which are infested by small parasites with rounded masses of pigment, which suggests that the changes leading to sporulation had commenced. The parasites are only about one-third the size of the corpuscles. The latter are not very well preserved, and their outlines are indistinct.

The Importance of Microscopic Examination in Diagnosis and Treatment.—It is not necessary for the simple tertians and quartans as a rule. In a malarious district ague dominates the whole of the diseases of the community. Accordingly all sorts of cases turn up as "fever." For instance, consumption will turn up as "quotidian fever of several months' duration." Here it is probably the stethoscope rather than the microscope which makes the diagnosis. Sometimes the microscope is very useful in surgical cases. A few days after an injury in a patient who has been incubating ague, there is a rigor, the temperature flies up, there is pain in the bones and joints and in the wound itself. Examination of a drop of blood speedily allays the alarm of pyæmia, and a dose of quinine dispels the unpleasant symptoms.

It is of most importance in the irregular fevers. Cases occur which simulate sunstroke, enteric fever, pneumonia. Again, I have seen a case where the only complaint was of feeling unwell, and the symptoms were extreme exhaustion and anæmia. There was no fever. Another case, in a child, from the extreme depression suggested diphtheria. The only way of arriving at a speedy and certain diagnosis in these cases was by examining a drop of blood, when some form of malignant parasite was discovered.

The cases that are seen at home are usually of the irregular class. On the other hand, there are many cases in which there is, with a history of having had ague abroad, a tendency to febrile attacks on small provocation. These are very frequently not due to ague but to the weak state resulting from it, and it is of much value to have a negative decision microscopically, when the large doses of quinine which would be appropriate in the presence of the parasite may be with advantage omitted.

Finally, the discovery by Golgi of the relation of the life cycle to the paroxysms, and that the spores are more readily killed by quinine than any other stage of the animal, has taught us the ideal time at which to give the drug—viz., three or four hours before the expected onset of the paroxysm, in order that the spores may be born into blood saturated with quinine. In those cases where the fever is of the irregular type, of course this rule does not apply so strongly. The indication there is to get the quinine in as soon as possible and in one large dose, hypodermically if necessary.

II.—TWO CASES OF BERI-BERI.

By Dr. Geo. S. Middleton.

On 26th February, 1896, two Lascars were admitted into my ward from the s.s. *Britannia*, which had just reached Glasgow from Bluefields, Nicaragua. Both suffered from great weakness, especially of the legs, and from œdema. Five other cases of the same disease had occurred on board the ship, of whom three had been landed in America and two had died at sea. My two patients were the last to become affected, and sickened within a few days of each other, about three weeks prior to admission.

They were both young men (25 and 23), and both were occupied as firemen. While the one presented only a slight unsteadiness in his gait, the other could scarcely walk a step or two even when supported on both sides, and not at all alone. The two cases differed greatly in severity, but presented practically the same symptoms.

There was weakness of the muscles of the limbs, more marked in the legs than in the arms. Sensation in the legs, especially below the knees, was slightly defective, and in the less severe case there was slight analgesia there. The limbs were tender on pressure, and there was a subjective sensation of constriction about the ankles, knees, and waist, with, at the commencement, some tingling in the feet. The reaction of degeneration was not definitely obtained in either case. The knee-jerks were quite absent, while the plantar reflexes were present. There was no ankle clonus. There was no muscular atrophy, beyond what might be accounted for by a chronic illness; in particular, there was no wasting of any special group of muscles at any time.

Œdema was present in both on admission; but while slight and of short duration in the one, in the other it was severe, and gradually spread up the thighs to the trunk, and even involved the arms, which became greatly swollen. In the severe case there was also at a later stage evidence of fluid in the pleural cavities.

In neither case was there any enlargement of the cardiac dulness. In the slighter case the action of the heart was good, but in the more severe case cardiac action was very feeble, and on one occasion the patient had a severe attack of syncope. There was no murmur.

The urine tended to be defective in amount, especially in the more severe case, where it at first was very scanty; latterly in both it was abundant. In both albumen was frequently, but not always, present; generally only a mere trace, but sometimes in the severe case more abundant. In both, hyaline and granular casts were occasionally found, more numerous in the severe case.

The temperatures were generally normal, but in each case there was pyrexia for three or four days, traced in the one to a gumboil, but of unknown origin in the other.

The blood in both cases presented a considerable diminution in the amount of hæmoglobin, while the corpuscles appeared to be more numerous than in normal blood.

During convalescence both presented desquamation, beginning in the feet and extending over the whole of the body.

The one patient rapidly improved, and was soon allowed to get up; the other was very ill for a time, and had a slow convalescence.

They were dismissed on 9th May, 1896, practically well, but without knee-jerks.

The combination of paralytic symptoms with œdema, and their occurrence in two Lascars some of whose shipmates had been similarly affected, led me at once to diagnose these as cases of beri-beri. More prolonged observation of them tended to throw doubt on this diagnosis, for reaction of degeneration and atrophy are said to be essential symptoms, and albumen is never present. In neither of these cases could the reaction of degeneration be affirmed to be present (possibly from defective examination), and there was never any muscular atrophy, whilst albumen was generally present in their urine, possibly from a prior renal disease. Failing, however, to refer this combination of symptoms to any other cause, I upheld the diagnosis of beri-beri, and was corroborated in this by my friend, Dr. George Marshall, who has perhaps seen more of this disease than any of us.

Further confirmation of the diagnosis will be given by Dr. Walter Hunter's report of the bacteriological investigations which he very kindly made. He has isolated the microbe of beri-beri described by Pekelharing and Winkler, and thus has the credit of being the first, so far as I can learn, who has succeeded in doing so away from the countries where the disease is endemic.

III.—THE BACTERIOLOGY OF BERI-BERI.

By Dr. W. K. Hunter.

The question of the bacteriology of beri-beri is one which has for some years past created much interest and discussion.

Beri-beri, as Dr. Middleton has told us, is a multiple peripheral neuritis, similar to alcoholic or arsenical neuritis and in some respects to diphtheritic paralysis.

As far as one understands a neuritis of this kind, it is due to some poisonous substance circulating in the blood. In alcoholic neuritis alcohol is the poison; in diphtheritic paralysis the poison is a toxin generated in the tissues, the result of the vital activity of a specific micro-organism.

The problem therefore which presents itself to us is—What causes the neuritis of beri-beri? Is it a poison passing directly from without into the circulation in the form of unwholesome food or impure water? or is it a toxin formed in the blood or tissues of the patient by a specific micro-organism growing there?

Both these theories have found exponents; but it is along the lines of the latter that we have sought for an explanation of the neuritis in our two cases, and therefore our search has been for what we may call the specific "microbe" of beri-beri.

Pekelharing and Winkler, the two Dutch physicians Dr. Middleton has referred to, some years ago isolated such a micro-organism. This, they say, is a white staphylococcus with similar morphological appearances to the staphylococcus pyogenes albus, and with the pathogenic property that when injected into rabbits it causes a multiple peripheral neuritis. It was with this in mind that Dr. Middleton asked me to examine the blood of his two patients. This was accordingly done, with the result that, by the aid of a one-twelfth oil immersion lens, one could see in the blood-serum numerous small micro-organisms in the form of cocci, some solitary, some in pairs, and some forming short chains, and all moving freely about in the field of the microscope. Following this, tubes of various culture media were at different times inoculated with blood from the two patients. In eight of these tubes we obtained growths of a white staphylococcus precisely similar to that described by the Dutch observers.

Injections from these growths were then given to rabbits. The animals subsequently showed unmistakable signs of paralysis, and on *post-mortem* examination their nerves were demonstrated to have the characteristic appearances of peripheral neuritis. The micrococci could again be cultivated from the blood of the rabbits injected. So that we have complete evidence that in the circulation of our two patients there was a micrococcus which can produce in rabbits a disease similar to beri-beri and which we may fairly claim to be the specific "microbe" of beri-beri.

It is with considerable satisfaction that I make this statement, for the observations of Pekelharing and Winkler have not formerly found much definite confirmation, but, on the other hand, have been subject to a very great deal of adverse criticism. There is much more that I might say on the bacteriology of beri-beri, but as it is mostly detail, appealing more to those specially interested in bacteriology, I shall reserve it for publication. In the meantime what is of interest to the physician is that we have found in the blood of our two cases of beri-beri the white staphylococcus of Pekelharing and Winkler, and we have proved its pathogenic properties.

IV.—A CASE OF MYXŒDEMA COMPLICATED WITH CARDIAC DISEASE.

By Dr. R. Barclay Ness.

The account of this case appears as an original article at page 94.

Dr. Middleton had seen the patient, and quite agreed with the diagnosis. It was only the second time he had met with myxœdema in a male, and, curiously enough, in each of these cases the thyroid treatment had failed, and a fatal result had occurred as a result of the presence of pathological conditions other than those involved in the diagnosis of myxœdema. The first case was one in which the patient died from an intra-thoracic tumour. Otherwise his experience of the thyroid treatment had been most satisfactory.

Professor M'Call Anderson had never met with a single case of myxœdema which had failed to be rapidly and completely cured by the administration of thyroid. At the same time, our experience of other remedies should lead us to expect that idiosyncrasies of particular patients may also influence the response obtained under the treatment by thyroid gland.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1896-97.

MEETING VIII.—10TH MAY, 1897.

DR. FLEMING *in the Chair.*

I.—A CASE OF MITRAL STENOSIS, IN WHICH AT A LATE DATE THE MURMUR UNDERWENT A COMPLETE ALTERATION, FROM A THROMBUS ATTACHED TO ONE OF THE CUSPS OF THE VALVE.

BY PROF. W. T. GAIRDNER.

Mary C., æt. 21, admitted to the Western Infirmary, 21st October, 1896, her symptoms, including as they did, frequent hæmoptysis and considerable pyrexia, with disseminated râles in the chest, being such as might easily have suggested rapid phthisis; but a murmur over the cardiac apex, of the most distinctive A.S. rhythm, and regarded as one quite unequivocally of mitral stenosis, tended to make tuberculosis at all events less probable, while it afforded another explanation of the hæmoptysis, though not perhaps of the fever. There was no rheumatic history to be made out; and as her mother was said to have died of "consumption," it was pointed out to the clinical class how easily, if the leading physical sign of the mitral stenosis had been missed, or not taken duly into account, the case might have passed for a quite ordinary one of tubercular fever or rapidly progressive consumption. Her state, indeed, as indicated by the temperatures for ten days after admission, ranging up to over 104° F., was one of considerable danger to life from the pyrexia alone. Later on these high temperatures subsided, and what seemed to be a convalescence set in, the murmur, however, continuing unchanged. After about two months' residence, she was discharged in a greatly improved condition to the convalescent home on 18th December. When she returned home again she was fairly well, but unable to do any work on account of shortness of breath. Cough was moderate, and she did not observe any blood in her expectoration. When she again applied to the Western Infirmary on 17th March, five months after her first admission, she was much worse, but not on this occasion feverish, the temperatures for more than a fortnight ruling mostly below 100° F. The hæmoptysis, if present at all, was insignificant. The renewed illness was attributed to a chill two days before admission. The râles in the chest, though numerous and varied, were not to be distinguished from those of bronchitis, and no blood was observed in the sputa till some days after admission. The urine was abundantly albuminous with tube-casts. There was only slight dropsy. The cardiac phenomena were unchanged, and a sphygmogram obtained two days after admission showed a fairly good tracing, with all the elements in their normal relations, and a perfectly regular rhythm.

Within three weeks after admission the temperature rose again to 102° F., and remained for about a week in a somewhat unstable condition, settling down again, however, about the middle of April to what might be taken for normal. On the 19th of April she was very ill, but there was no essential change in the physical signs so far as the heart was concerned. The aggravation was fairly to be attributed to the renal condition, with a considerable amount of pulmonary complication, mostly bronchitic. On the 21st of April, however, Dr. Gairdner directed the attention of the clinical class to a change in the character and rhythm of the murmur, as compared with an observation carefully made by the resident only two days before. "It comes out to-day, apparently for the first time, that there is a complete change in the character of the apex-murmur, which is now a prolonged and emphatically blowing V.S., without any trace, so far as can be observed this morning, of the rough A.S. murmur which in all previous examinations has been the most characteristic fact in the cardiac physical diagnosis. The significance of this change is all the greater, that Dr. John M'Kendrick (the resident) distinctly detected the A.S. murmur two days ago without any V.S.; and nothing can exceed the precision of all the previous notes on this point. The emphasis of the second sound over the pulmonic area, which seems to have been variable in degree in previous reports, is to-day particularly well-marked." The pulse on this occasion was noted as "so small as to present difficulty in counting;" but both at the wrist and the heart its rhythm was still regular.

Three days after this the patient died. It may be mentioned that about a month before her death a few tubercle bacilli were found in the sputum after careful search, all previous examinations on this point having had a negative result.

Post-mortem Examination.—The heart is markedly enlarged, weighing 340 grs.; this is due mainly to dilatation of the right ventricle. There is a very pronounced mitral lesion causing marked stenosis, and allowing water to pass through the aperture very slowly. Viewed from the auricular surface, the aperture is apparently entirely closed by a bulky mass of fibrine; this has an attachment apparently to the entire auricular suface of the anterior mitral segment. The posterior segment is free of vegetation in great part. Viewed from the ventricle, the thrombus, which has the size of an ordinary marble, is seen projecting to a slight extent from the margin of the cusp. The curtains have coalesced at their edges, which are thickened and rounded. The orifice is oval in form, 1·5 cm. in greatest diameter. (The little finger cannot pass through the opening.) Slight hypertrophy, but considerable dilatation of right auricle. The tricuspid valve admits three fingers. Commencing atheroma in pulmonary artery and aorta. Passive congestion of the lungs, kidneys, spleen, &c.; also hæmorrhagic infarctions of the lungs, and old infarctions of the kidneys. Healed or healing (all but obsclete) tuberculosis of lungs and bronchial glands. Distinct evidences both macroscopically and microscopically of nephritis, both of the interstitial and parenchymatous forms. Nothing else noteworthy.

Professor M'Call Anderson asked if the left ventricle was hypertrophied, and, receiving an answer in the negative, asked what was the condition of the left auricle: this being dilated he suggested that the disappearance of the obstruction murmur might be accounted for by the dilatation of the left auricle.

Professor Gairdner agreed that this might explain the disappearance in some cases but not in all, and it could not explain the really important fact of the sudden appearance of a regurgitation murmur superseding the other, which had been so long and so carefully observed.

II.—SPECIMENS ILLUSTRATING ANEURYSMS OF THE ARCH OF THE AORTA WHICH EITHER OPENED INTO OR PRESSED UPON THE VENA CAVA SUPERIOR OR THE PULMONARY ARTERY.

By Prof. W. T. Gairdner.

[This communication was submitted to the Society by Professor Gairdner, in connection with an investigation he had recently been making with a view to an article on aneurysm of the arch for Professor Clifford Allbutt's *System of Medicine*, from which certain extracts were read; the object being to bring to a focus all the available material furnished by the Glasgow museums in illustration of the somewhat rare conditions referred to in the title.]

59B. *Aneurysm of aorta perforating superior cava.* (Dr. W. T. Gairdner.)

There is an aneurysm occupying the transverse arch of the aorta, but with two special and more sacculated dilatations at the left and right extremities of the transverse arch. The former of these projects backwards and the latter forwards. The right bulging projects against the superior cava, producing a marked convexity of it. On the summit of this convexity, and about 4·8 cm. beneath the origin of the innominate veins, there is an oval aperture 0·75 cm. in diameter, which forms a communication between aneurysm and vein. The wall of the aorta was very atheromatous.

D. W., æt. 44, a labourer, presented history of a pulsation, referred to right sterno-clavicular region and neighbourhood, of two years' standing. On 9th January, 1888, he detected swelling of face and right arm, probably with some anasarca of upper part of body. The swelling was preceded by a feeling as if something had given way on the left side (rather to left of cardiac apex). This feeling was not a pain, but attended by faintness and cold sweat. On admission on 13th January, there was swelling of face, neck, and upper part of trunk, and considerable development of veins all over the front, marked lividity of face and head; loud V.S. and V.D. murmurs all over front, but with mainly the distribution of aortic double murmur. Abnormal area of dulness over whole manubrial region and some distance on either side. Died 21st January.—(Pathological Reports, 24th January, 1888, No. 1816. Reported in detail in *Lancet*, 22nd June, 1889, p. 1233.)

59. *Aneurysm of aorta perforating into left auricle.* (Dr. W. T. Gairdner.)

In the preparation two aneurysms are visible, a larger and a smaller, both having their seats immediately above the aortic valve. The smaller forms a shallow sac just behind the right segment of the valve. The larger is much more definitely sacculated, and its aperture is in the posterior wall of the aorta, just behind the posterior segment. This opening is nearly 2·5 cm. in diameter, and its edges are rounded. The pouch of the aneurysm forms a nearly globular tumour which projects against the left auricle. On examining the left auricle (a flap of which is stitched down in the preparation) the aneurysm is seen to form a somewhat pyramidal projection, at the apex of which there is an oval aperture about a quarter of an inch in diameter, and with rounded somewhat prominent margins. Just beside this aperture there is a smaller one, which has also distinctly prominent margins.

Besides these aneurysms, there were two other partial ones in the aorta, one just above the principal sac, and the other on the posterior wall of the aorta just at the level of the giving off of the great vessels. The internal coat of the aorta had an almost continuous cicatricial appearance, and presented frequent longitudinal folds. There was thrombosis of the innominate vein, globular thrombi in the heart, and hæmorrhagic infarction of the lungs. The valves were normal, but the heart was hypertrophied, weighing 16 oz.

The case was that of a woman, æt. 38, who complained of general symptoms of heart disease of a very severe character, the duration of the more severe symptoms being about thirteen weeks. For about four weeks before death the expectoration was persistently hæmorrhagic. There were the physical signs of cardiac hypertrophy, with V.S. and V.D. murmurs heard most distinctly at lower sternum, also at pulmonic and aortic cartilages, and, though less distinctly, at apex. The V.S. element was conveyed into the neck.—(Pathological Reports, 17th February, 1882, No. 776.)

[There was nothing in this case, except the murmurs, to suggest anything differing from the usual course of severe valvular disease with hypertrophy and dilatation of heart. The murmurs were regarded as aortic, but not necessarily aneurysmal.]

57B. *Aneurysm of aorta projecting into pericardium and pulmonary artery.* (Dr. W. T. Gairdner.)

The aneurysm arises immediately above the valve, two proximate cusps being inserted into its ring. The aperture, which is round, measures 3·5 cm., and is situated on the right and anterior wall of the vessel. The aneurysm projects against the pulmonary artery, and separates the artery to a large extent from the aorta. The sac is a somewhat bulky one, measuring 7 cm. across. It is divided internally into three compartments; one bulging into the pulmonary artery, and one escaping on either side. The pulmonary artery has been laid open, and it shows a rounded swelling 3 cm. in diameter, and with a projection of 2 cm. almost filling up the calibre of the artery. The swelling is so situated that its lower part corresponds with the valve, two cusps of which are adherent by their borders to the valve, whilst the remaining one is lost on its surface. Beneath and to the right of this bulge there is a rounded one, 4 cm. in diameter, which projects partly into the conus arteriosus of the pulmonary artery, and partly into the pericardium between pulmonary artery and aorta behind the wall of the ventricle, almost crossing the middle of its summit. A third sac lies immediately to the left of the pulmonary artery and is slightly higher than the others; it has a diameter of about 2 cm. There was in this case another aneurysm near the summit of the arch. It had an orifice about 4 cm. in diameter. There was marked dilatation of the right ventricle, and the tricuspid orifice admitted six or seven fingers. The muscular tissue of this ventricle was markedly fatty, especially where the aneurysm projected into it.

John M., æt. 41, a sailor, was admitted complaining of breathlessness on the least exertion. The cardiac dulness was increased in all directions, and there were V.S. and V.D. murmurs heard best over the base and pulmonic area. He latterly developed orthopnœa, cyanosis, and great anxiety of expression, with a jaundice-like pigmentation of the skin.—(Pathological Reports, 13th July, 1892, No. 3062.)

[In this case there was little except cyanosis to indicate any unusual type of disease; and the murmurs were those of an aortic valvular lesion, although their being heard over the pulmonic area might have suggested something like the true diagnosis. There was no perforation.]

57. *Aneurysm of aorta projecting into and perforating pulmonary artery.* (Dr. D. C. M'Vail.)

Just above the insertion of the aortic valves there is an aneurysm about the size of a large chestnut, with an orifice nearly circular in shape, and about 2·5 cm. in diameter. The aneurysm projects directly against and pushes before it the first part of the pulmonary artery, which is rendered convex by it. The aneurysm communicates with the pulmonary artery near its lower part by an oval aperture, 1 cm. in diameter, and with rounded margin. The edge of the posterior semilunar curtains of the pulmonary artery crosses this orifice at its middle.

The patient was a blacksmith, æt. 42.

58. *Aneurysm of the aorta projecting into and perforating pulmonary artery.* (Dr. W. T. Gairdner.)

An aneurysm, as large as the fist, occupies the base of the heart, originating, by an aperture large enough to admit two fingers, just above the aortic valve. The aneurysm is insinuated forward, pushing aside and pressing on the pulmonary artery on the one hand, and the left auricle and auricular appendage on the other. The pulmonary artery is stretched over the aneurysm, being much flattened thereby, and its posterior wall markedly thinned. In this posterior wall there is an oval aperture with rounded margins about 1 cm. in length, and about 2·5 cm. above the pulmonary valve. It forms a communication between the aneurysm and the pulmonary artery. There was no stratified clot in the anuerysm, the aortic valve was nearly, if not quite, sufficient, and there was no thickening of the curtains. The heart was much enlarged, weighing 23½ oz.

The case, which was that of a labourer, æt. 31, was characterised by great angina pectoris and dyspnœa, with lividity, lasting more than a year, and without any history of rheumatism. The aorta was found to be dilated; V.S. and V.D. murmurs, heard very distinctly at first, were interpreted as being aortic in origin, but in the progress of the case became very soft and almost, or quite, suppressed, giving way to V.S. murmur, regarded as mitral or tricuspid. Great hypertrophy and dilatation of both ventricles, with venous pulse, became apparent in the course of observation. The liver also became enlarged; the urine scanty, of high specific gravity, and albuminous. The pulse was one of low tension, almost hyperdicrotous, with an occasional irregularity, but not complete intermission, the low arterial tension increasing as the case proceeded. Anasarca became extreme, with pervigilium and orthopnœa. Death was at the last sudden, but only after a very lengthened agony. For details, see Journal of Ward I, K, p. 11.—(Pathological Report, 23rd January, 1878, No. 290.)

[Both the murmurs here were probably aneurysmal, inasmuch as the aortic valves were not diseased. The disappearance of the V.D. in the course of observation is not easily explained, unless as a consequence of the increasing low arterial tension, which, again, may be referred to the communication with the pulmonary artery. There was no specific fact to indicate the time of the rupture.]

59A. *Aneurysm of aorta bulging into right auricle and superior cava.* (Dr. Finlayson.)

The aneurysm is not definitely sacculated, but forms a one-sided dilatation immediately above the valve, projecting chiefly between the pulmonary artery and the right auricle. It shows two rounded bulgings, the larger protruding against the right auricle, which it bulges inwards; the smaller is projected against the superior cava, which it also bulges inwards. The aortic curtains are slightly thickened, and the valve was found scarcely competent; there was marked hypertrophy and dilatation, especially of the right ventricle.

J. P., a seaman, but latterly a quay labourer, æt. 41, traced his illness to a blow over the upper part of the sternum, about six months before death, which was followed in three days by cough and bloody sputum. During his residence in hospital the symptoms were mainly cardiac, but the pulse was noted as typically "water-hammer," and there was marked "capillary pulse."—(Pathological Report 16th November, 1885, No. 1440.)

[Nothing special here to indicate the diagnosis.]

Dr. Workman said he had been asked by Professor Gairdner to look for similar cases in the Glasgow Royal Infirmary, and he had looked up half a dozen cases. He found no case of rupture into the vena cava superior or into the pulmonary artery, but there were several cases of aneurysm which protruded and pressed on the pulmonary artery without bursting into it. The following are the illustrative cases from the pathological records of the Royal Infirmary, viz.:—

101. *Aneurysms situated just above the aortic valves.* There are here two aneurysms—a larger one situated in front and a smaller one to the right. The former is about the size of an apple, and lies between the aorta and pulmonary artery. It is bounded to the left by the left auricle, and is free towards the right. It communicates with the aorta by an aperture with rounded edges which is large enough to admit two fingers, and is situated just below the valve—its border, in fact, corresponding with the level of the valves, and having two of the curtains ending on it. The other aneurysm is much smaller, and lies immediately to the right of this one, being situated between it and the right auricular appendage. It forms a small hemispherical bulging. Both the arch and the thoracic aorta presented well-marked atheroma. The heart was very much enlarged, weighing 17 oz., and there were patches of thickened endocardium without any definite valvular disease. There was general œdema with pleuritic and pericardial effusion, and œdema of the lungs with hæmorrhagic condensation. According to the history the illness was of six months' duration, and was accompanied by pain, cough, and dyspnœa, and latterly orthopnœa. The patient was a blacksmith, aged 40.—(Pathological Reports, 13th January, 1874.)

102. *Aneurysm of first part of the aorta.*

It commences apparently on its inner curvature, and grows most prominently outwards and forwards so as to project between aorta and pulmonary artery. The ductus arteriosus is stretched across the left lateral part of the tumour, and measures 1¼ inch. The pulmonary artery at its origin is much compressed, and an opening exists in it communicating with the cavity of the aneurysm.

The posterior lobe of the aneurysm passes backwards so as to compress the right division of the pulmonary artery and laterally the superior vena cava. Considerable increase or hypertrophy of muscular texture encircles the root of the vena cava as it enters the right auricle, extending upwards upon its surface for more than an inch. There is dilatation of the right auricle and ventricle. Between the vena cava and the anterior lobe of the aneurysm the tube of the ascending aorta is seen giving off regularly the innominate, common carotid, and subclavian. The surface of the heart is covered with old adhesions due to pericarditis.

107. *Aneurysms of the aorta.*

There is considerable atheroma of the aorta, and immediately above the valves two aneurysmal pouches are seen, one projecting towards the right, the other towards the left. The left ventricle is thickened and dilated. History of cardiac dyspnœa, palpitation, and œdema of the feet. Epigastric pulsation, and V.S. and V.D. aortic and V.S. mitral murmurs. —(Dr. J. Lindsay Steven's case, *Glasgow Medical Journal*, January, 1888).

108. *Aneurysm of aorta.*

The greatest part of the bulging is towards the right side. It projects towards the auriculo-ventricular groove, and also encroaches somewhat on the lumen of the pulmonary artery. The left ventricle is much dilated and its walls hypertrophied. In the wall of the aneurysm numerous calcareous plates are found.—(Pathological Reports, 1102.)

109. *Aneurysm of the aorta immediately above the aortic valves.*

The aneurysm has several saccules, the largest of which extends directly backwards so as to occupy the arch formed by the ascending, transverse, and descending aorta. In this situation it compresses the right pulmonary artery. At one point within the pericardium the aneurysmal wall is extremely thin. This point corresponds to the base of the left auricular appendix. The superior vena cava is also pressed upon by the aneurysm. The heart is enlarged from hypertrophy of the left ventricle. There is thickening of the mitral valves. Patient died from chronic bronchitis and consolidation of the right lung, without tubercular disease. History of rheumatic fever. Symptoms of chronic bronchitis during twelve years, and during last year evidences of passive hyperæmia with the flow of blood from right heart and lungs.—(Dr. Perry, Pathological Reports, 951).

135. *Aneurysm of aorta, rupturing into the left main bronchus.*

Examination of the preparation shows that there is an aneurysm arising from the inferior aspect of the descending arch, by a somewhat quadrilateral aperture measuring about 2 in. in the direction of the vessel and about 1 inch transversely; through this aperture a somewhat bulky smooth clot is visible. The aneurysm, which is about the size of a large orange, passes downwards from this aperture so as to be situated between the base of the heart and the left bronchus. The aneurysm was also firmly adherent to the left lung, and the pulmonary artery was found to pass along the inferior surface of the aneurysm, being firmly adherent to the wall of the aneurysm and much reduced in calibre. The left bronchus was in very intimate relations with the aneurysm. In the preparation this bronchus is laid open and kept apart by a piece of whalebone. It is seen that, from a point about an inch beneath the bifurcation of the trachea, the anterior wall of the bronchus is entirely awanting down to the point where the bronchus divides into the secondary branches. The aperture so produced is seen to be filled with pale clots, by which the calibre of the tube is filled, the opposite wall of the bronchus forming in this part the wall of the aneurysm. The branches of the left bronchus down to their finest ramifications were found to be filled with soft brownish clots, and the lung tissue was completely collapsed. The left pneumogastric nerve passes down in front of the aneurysm, becoming firmly adherent to its wall, and the recurrent is also discovered passing up from behind the aneurysm; but both are so firmly incorporated with the wall that dissection is precluded. The other organs presented nothing remarkable.

The symptoms during life began about fifteen months before death. During observation in hospital, they were chiefly hoarseness of voice, occasional difficulty of swallowing, pains in the upper region of sternum and between clavicle and vertebræ behind on left side, severe hæmoptysis at intervals, dulness over whole but more especially over upper part of left lung, V.S. murmur carried along the great vessels, inequality of radical pulses, absence of râles in left lung and deficiency of respiratory murmur, with strongly marked tubular respiration over upper lobe. The case was under Dr. Gairdner in Ward VII.—(For full report see *Glasgow Medical Journal*, November, 1872; also Pathological Reports, 25th September, 1872.)

Dr. Hector Cameron said he was interested in the cases narrated by Professor Gairdner. He was glad to know of the occurrence of varicose aneurysm internally, but a case of aneurysmal varix in the chest seemed rather astonishing.

Professor M'Call Anderson said he was indebted to Professor Gairdner for the paper. His experience coincided with Dr. Gairdner's that pressure on the vessels due to aneurysm was exceptional, whereas a solid tumour causes pressure on account of its immobility. Pressure upon the large veins is not so rare as an actual perforation, yet aneurysm causes perforation in other structures.

III.—ANEURYSM OF THE THIRD PART OF THE SUBCLAVIAN SUCCESSFULLY TREATED BY LIGATURE OF THE FIRST PART OF THE AXILLARY.

By Dr. Hector Cameron.

The gardener at Gartnavel was engaged in March, 1896, in transplanting trees and carrying them on a sleigh. The horse started, and the tree being about to fall the patient kept it from falling with his left arm, and while doing so he felt something give way about the left clavicle. In a day or two a pulsating tumour appeared at the root of the neck, which was diagnosed by the assistant medical officer as aneurysm. He was admitted to the Western Infirmary, and the tumour was found to extend from beyond the middle of the clavicle inwards to the sterno-clavicular joint. There were no physical signs of the existence of aneurysm in the chest. Careful examination showed that the aneurysm existed at the third part of the subclavian artery. The patient was admitted on the 12th May, and was kept in bed until the 29th, when the bulk of the tumour seemed to be reduced to the eye, but not less to the hand, and the pulsations seemed as vigorous as ever.

On 29th May, needles were introduced into the sac and the walls scratched. He was kept in bed from this until October, the needle operation being practised on five separate occasions, upon the whole with good effect, but it was evident that he was not going to get well. It was impossible to ligature on the cardiac side of the aneurysm, and, as the results of the distal ligature are not encouraging, it was decided to ligature the first part of the axillary artery. The operation was performed on 21st October by cutting through the superficial structures and the pectoral muscle, and, the acromio-thoracic artery being exposed, was held to one side and the ligature applied to the axillary on the cardiac side of the branch aforementioned. The ligature consisted of three strands of fine catgut. After ligature the tumour became almost solid, but pulsation still continued, not expansive in character, and diminished on compressing the carotid, and in a few days ceased. On 20th November, being pressed for beds, the patient was allowed to get out of bed and walk about, and on 22nd November he was sent to Lanark, and while lighting his pipe he suddenly felt he could not speak; he was not unconscious, and motioned with his left hand that he could not speak. It was discovered that he was hemiplegic on the right side, aphasic, with some paralysis of the right facial muscles. There is considerable recovery now from these conditions.

Mr. H. E. Clark congratulated Dr. Cameron on the success of the operation, there being very slight deformity, a small cicatrix, and a very useful arm. The third part of the subclavian gives off the posterior scapular, and the distal ligature is not usually successful. One element of success in Dr. Cameron's case was doubtless due to the fact that the posterior scapular was not, in this case, given off by the third part of the subclavian. He had used needles in the sac, and found that the tumour became hard, but considerable force was required to get the needles through the wall of the sac.

Dr. Rutherfurd said there was one additional point he would like Dr. Cameron to go into. The ligature of fine catgut was open to objection; fine catgut prepared with chromic acid is hard, and prepared without chromic acid is not resistant enough, and prepare it as you will, fine catgut as a ligature exercises pressure on a limited portion of vessel wall, and its use is always attended by a sense of possible disaster. He prefers to follow the practice of Ballance and Shattock, who use silk of reasonable thickness, and tie with a stay-knot; this runs home in a way that the catgut does not.

Dr. Fleming congratulated Dr. Cameron on the result of the operation, and agreed with Mr. H. E. Clark that some of the success was due to the previous needling. He asked if the three strands were tied all in one, and Dr. Cameron said that was so, and the internal coat was ruptured.

Dr. Cameron said that he dissented from Dr. Rutherfurd's view that it was a safe practice to bring the two sides of a vessel together with a broad ligature. Hunter did so, but Syme insisted on using a thread that gave limited pressure, and tied until the internal and middle coats gave way, and he had great success. His practice was similar, and he had tied all manner of vessels and never had secondary hæmorrhage. In one case of ligation of the external iliac for femoral aneurysm the parts became septic, and the patient died of gangrene of the foot, but that had nothing to do with the ligature. The real security against secondary hæmorrhage is buttressing down of the tissues, and the impossibility of the vessel becoming pervious.

IV.—HÆMATOSALPINX CONNECTED WITH AN EXTRA-UTERINE FŒTATION.

By Dr. W. L. Reid.

Mrs. P., æt. 32, was admitted to the Western Infirmary, 30th March, 1897, complaining of abdominal pain and constant discharge of dark blood from the vagina.

Patient began to menstruate at 14, and was regular and normal till marriage at 19. She has had no living children, but three miscarriages between the second and third months of pregnancy, the first having happened five months after marriage. At that time she states there was "something left behind," and a doctor in the country used the curette, after which she menstruated regularly and normally. The last miscarriage was in October three years ago, and shortly afterwards she was operated on in a private hospital in Glasgow for "inflammation of the left ovary."

On 24th October, 1895, I saw patient, whose chief complaint then was of dysmenorrhœa, and treatment by dilatation was advised on account of stenosis of the os internum uteri. In October last Dr. Wilson, Govan, used the curette, and during November and December there was no menstrual discharge. About the New Year a sanguineous vaginal discharge appeared, and has continued more or less steadily ever since.

For the past four years patient has had pain in the back, left ovarian region, and left leg, and since the New Year this pain has been greatly aggravated and complicated by occasional attacks of peritonitis.

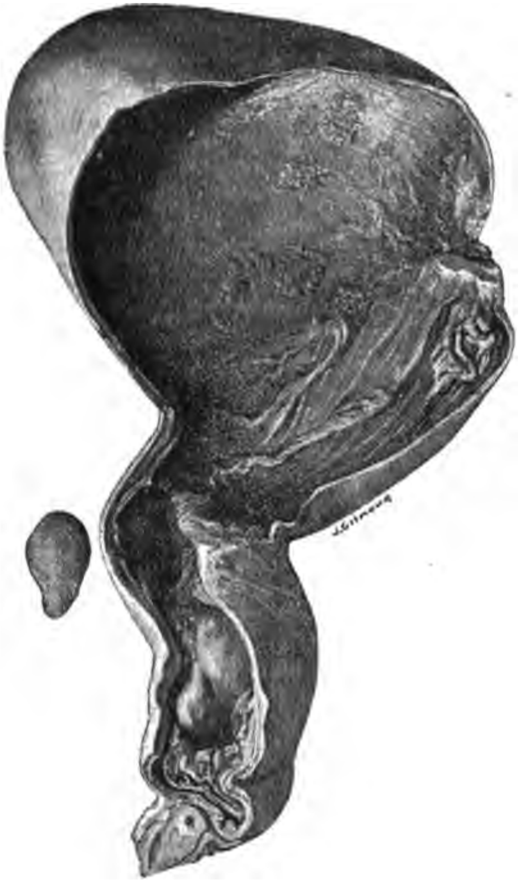
On 26th March of this year I saw her in consultation with Dr. Wilson, and found the uterus 3 inches in depth and lying high up against the inner surface of the left ilium. There was a feeling of tumour in the pelvic cavity, apparently cystic in character, but the tenderness was so great as to prevent careful investigation. When examined under chloroform in the Infirmary the bladder was found so stretched over the vaginal roof that an attempt to reach Douglas' pouch in the ordinary situation would have resulted in the bladder being opened. Above the bladder an obscurely defined tumour was felt, as if a cyst with a thick wall. Bimanual examination did not make the outline of this tumour much more definite, and it was found to be only moderately movable and and about the size of a large orange.

On 6th April the abdomen was opened with difficulty owing to the bowel being adherent to its anterior wall. The tumour, described below by Dr. Sutherland, was reached only by patient tearing up of adhesions between folds of intestine, and in its neighbourhood there was found a quantity of semi-fluid dark blood. The tube was ligatured close to the uterus, and the broad ligament transfixed and tied. On the right side of the site of the tumour an orange-sized cyst was found, which could not be isolated owing to the density of the surrounding adhesions. It was therefore opened, a quantity of clear thin fluid discharged, and the cavity stuffed with iodoform gauze, the ends of which were brought out through the lower end of the abdominal wound. This cyst seemed either ovarian or pent-up peritonitic fluid. The cavity in the abdomen was washed out with a saline solution, and the upper part of the wound closed by silkworm sutures. The patient made a good recovery, and was dismissed on 30th April.

Dr. L. R. Sutherland submitted the following pathological report on the specimen:—

"The specimen which is submitted for examination is a greatly altered right Fallopian tube, the anterior wall of which has been removed so as to display the relation of parts. For convenience of description it may be divided into a markedly dilated part (the proximal portion) and a less dilated part (the distal extremity).

"The *proximal* portion, as shown in the accompanying illustration (p. 132), is represented by a cyst-like dilatation, 8 cm. in the long axis of the tube, and about 6 cm. in other directions. This has evidently arisen by distension, mainly at the expense of the upper portion of the wall of the tube. The wall has an average thickness of about 2 mm., but at places is much thinned and almost diaphanous. This is particularly the case at the postero-inferior portion of the wall of the tube at its uterine extremity, where the tissues of the wall are unduly friable. The lower part of the proximal swelling has a plicated mucous membrane continuous with the lining of the narrower distal portion, while in the upper dilated portion the folds are entirely effaced. Here, pale smooth areas, in which



the epithelial investment is still intact, alternate with dark-brown granular surfaces, devoid of epithelial lining, and coated at irregular intervals with altered blood.

"This portion of the tube contained partially coagulated blood of a black-red colour. Where in contact with the wall of the tube, the blood had at places a chocolate-brown or brick-red tint.

"The *distal* portion of the tube, which is separated from the proximal by a constriction, measures over 5 cm. in length, and varies from 1·5 to 2 cm. in diameter. Towards its free end it becomes tortuous, the coils being bound together by fibrous tissue, and indicated in the drawing on section. It terminates in a somewhat conical extremity. No trace of fimbræ nor of abdominal ostium is discoverable. The wall of the tube is here distinctly thicker than that of the proximal portion, and the folded mucous membrane much more evident.

"This portion of the tube contained a small quantity of liquid blood, and, in addition, two distinctly hard, more or less rounded masses, separated by a slight interval, and having the characters of unusual firm blood-clot. The smaller and more proximal of the two is about the size and shape of a hazel-nut, measuring 1·5 cm. by 1 cm. It was found in a slight recess, very loosely attached to the upper wall of the tube. It is shown in the illustration, lying above the cavity it occupied. The larger and more distal of the two masses is distinctly nodulated, and is roughly about the size of a marble, having a maximum diameter of 2 cm. It is firmly attached to the inferior wall of the tube. On cutting into these masses, the appearances presented by the section are those of compact blood coagulum.

"In small portions of the larger nodule which have been examined microscopically, chorionic villi have been found. The absence or presence of an amniotic cavity, or of other further evidence of pregnancy, will be determined when serial sections are made. In the centre of the smaller nodule chorionic villi have also been found. The tissues of the wall, around the point of attachment of the larger nodule, show very numerous turgid capillary vessels. Scattered through the tissues of the wall—mainly in the fibrous tissue investment—are abundant yellow-brown granules of blood pigment. Sections made from several portions of the wall afford evidence of slight inflammatory changes."

Dr. Kelly asked Dr. Reid if he ever saw a case of hæmatosalpinx unconnected with ectopic gestation.

Dr. Reid replied that he had seen two cases where nothing was found in the way of evidence of ectopic gestation. In this case there was amenorrhœa, as in the other two cases.

V.—FRESH SPECIMENS.

A. BY DR. R. M. BUCHANAN AND DR. MALCOLM BLACK.

Dr. R. M. Buchanan and Dr. Malcolm Black showed a spina bifida without tumour associated with hydrocephalus, and read the following notes:—

Mrs. A., æt. 34, 3-para, admitted to Glasgow Maternity Hospital on 8th May, 1897, at 9 P.M. Patient states the liquor amnii escaped on the 7th inst. about 12·30 noon, and that she had taken labour pains for some hours previously. About 7 o'clock on Saturday evening (the 8th) her medical attendant applied forceps, but failed to extract the head. He advised her removal to the hospital with a view to craniotomy.

On admission she was rather exhausted; pulse 120 per minute, and rather weak. The os was fully dilated. The head seemed partially engaged, but was at the same time hitched above the pubis. The cranial position seemed to be R.O.A.

The fœtal heart-sound was vigorous and slow, best heard below and to the right of the umbilicus.

Simpson's forceps were applied, but the head did not advance in any way.

Dr. Black on examining found the case to be one of hydrocephalus, and what had appeared to be caput succedanem was in reality an enlarged and bulging fontanelle. Under his direction the head was perforated in the occipital region, when a considerable quantity of yellowish fluid escaped. After this, extraction was easily accomplished by the cranioclast.

The placenta was found to be partially separated, but the hand had to be introduced into the uterus to extract it, as it seemed slightly adherent at its upper part.

B. BY DR. R. M. BUCHANAN AND DR. JARDINE.

Dr. R. M. Buchanan and Dr. Jardine showed a ruptured uterus, and gave the following account of the case:—

Mrs. C., æt. 34, 6-para, admitted 6th April. Last pregnancy two and a half years ago. Last period in beginning of March (two days only instead of a week). Never very strong. Suffered from an attack of inflammation after her third confinement. Had a good deal of leucorrhœa and pain in back after that. No history of any discharge of pus.

Says that three years ago, after birth of fourth child, noticed swelling of abdomen midway between umbilicus and pubes. This has gradually increased, and about a month ago ago she noticed it increasing rapidly. Eleven days before admission had flooding on retiring to bed; lasted nine hours. No lumps passed. She felt hot, and shivered a little during the night. Up next day. Every night had a constant oozing of black blood; none in day time.

Tumour measured 7½ inches vertically about 3 inches above umbilicus; 9 inches transversely. Soft; no contractions; no fœtal parts; no fœtal heart.

She was delivered on 3rd May; on the 4th the temperature rose to 102·6°; on the 5th she had vomiting; and she died on the 6th.

Post-mortem Examination.—Perforation at upper and lower ends of cervix, by an old pelvic abscess. Cervical tear extending between perforations, and exposing abscess cavity. The abscess extended between uterus and bladder upwards into the right iliac fossa.

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Session 1896-97.

Meeting VI.—24th February, 1897.

The President, Dr. Malcolm Black, *in the Chair.*

I.—SPECIMEN.

By Dr. E. A. Gibson.

Dr. E. Arthur Gibson showed as a fresh specimen a uterine fibroid which he had removed on the previous day. The patient was a widow, and had reached the menopause eight years ago. She had had no symptoms till three weeks ago. Profuse hæmorrhage occurred then, and was treated by plugging and ergot. She was afterwards put upon hydrastis. Another violent hæmorrhage occurred a week ago, and she was accordingly sent into a private nursing home, where he performed a complete hysterectomy. The specimen showed that the tumour occupied the anterior wall of the uterus, and had the usual characters of a fibroid. The posterior wall was very markedly attenuated.

II.—GYNÆCOLOGICAL CASES FROM THE VICTORIA INFIRMARY.

By Dr. T. W. Jenkins.

1. *The History and Post-mortem Appearances of a Case of Puerperal Fever.*—I have called the case about to be described by the common name of puerperal fever, though aware that it would be more accurately termed one of sepsis post abortum; but I have done so because there is reason to believe that the pathological changes which were found in the pelvic and abdominal organs after death are to a certain degree characteristic of a large class of cases of pelvic inflammation following alike upon abortion and parturition; because the therapeutic indications are the same at the earlier and the later time; and because I shall have occasion to remark upon a case in some respects similar which occurred after a full-time pregnancy.

The history of the case is as follows:—In the last week of September, 1896, Mrs. M., æt. 25, then in the sixth or seventh month of her first pregnancy, gave birth to a child said to have been dead for some time, and soon after fevered. For ten days she seems to have been exceedingly ill, and to have suffered from repeated rigors and abdominal distension and pain. On the thirteenth day she compelled herself to leave bed, and two days later, on the 12th October, made her way to the Victoria Infirmary Dispensary, where I found her in manifest distress and complaining of severe pain in the left iliac region, discharge of large blood clots from the vagina, dysuria, and constipation. A rapid examination showed the uterus to be enlarged; on its left side a tumour reaching from the pelvic floor to above the level of the inlet and apparently containing fluid; on its right side some parametritic infiltration surmounted by a mass in all respects like that on the left. The patient was straightway admitted to Dr. Parry's ward. In the course of the next few days she appeared to improve; but on the 19th an extension of the parametritic process was noted, and on the 21st it was deemed advisable to make an attempt to relieve a condition which was rapidly getting worse. Under chloroform we found the uterus wedged between two large apparently cystic swellings whose precise relations to the uterus could not be determined. Our view was that they were tubal, and that they contained pus. I punctured the sac on the left, and evacuated some thin pus similar to what at that moment was observed to issue from the rectum. Further puncture on both sides yielded nothing but a little blood. No improvement followed, and the patient died on the 23rd.

The autopsy revealed the following conditions:—

Great omentum, tinged and dark red, adherent to parietal peritoneum all round pelvic inlet, and projecting into the cavity in the form of two thick masses themselves adherent to the uterus, the adnexæ on both sides, and the pelvic peritoneum. These masses constituted the bulk of the tumours previously felt bimanually. Omentum further adherent to cæcum, which it had dragged into the pelvis. Processus vermiformis adherent to parietal peritoneum in front of lower part of sacrum.

Superincumbent intestines distended and covered with lymph. Pus in hypochondriac and iliac regions. Uterus enlarged; its cavity empty. Right Fallopian tubes slightly thickened; ostium abdominale closed, but yielding to gentle pressure and exuding pus. Right ovary, globular, was nearly 2 in. in diameter, bluish-black in colour, and full of pus. Left ovary not enlarged, but riddled with punctiform abscesses. Left tube not much thickened, not occluded, and yielding pus on pressure. Left parametrium the seat of an abscess cavity which communicated with the rectum and with the opening in the vagina.

In November, 1895, I had an opportunity of observing a patient who was admitted to the hospital twenty-one days after confinement at term with a history like that of the preceding case, Examination in narcosi showed the uterus to be displaced to the right, and to be closely connected with a large swelling which occupied the opposite side of the pelvis. The upper limit of the tumour was indistinct and dull tympanitic on percussion; the lower limit was above the level of the parametrium.

On the abdomen being opened the omentum was found firmly adherent to the anterior wall and to the pelvic brim, and projecting into the cavity as in the case I have just described. A large cyst, lined by a whitish fibrinous exudation and filled with clear fluid, occupied the space between the uterus and bladder, and similar smaller cavities were found in the deeper lateral parts of the pelvis. It became obvious that the tumour which had been felt on bimanual examination was in reality composed of the thickened mass of omentum and these serous cysts. The left appendages were apparently normal. The right tube was as thick as one's little finger, and adherent to the lig. latum and the parietal peritoneum. The right ovary was unaffected. The extremely friable right tube was removed, the fibrinous exudations were stripped off, the cavities drained and packed with gauze. Two days later the left tube, which had seemed normal at the time of operation, was as thick as its fellow had been, and was exuding pus. The left ovary was enveloped in a fibrinous exudation. On the following day the patient died.

The only conclusions which I shall draw from these cases are:—(1) That masses of omentum may assume all the characters we are wont to associate with inflammatory tumours of tubal or ovarian origin, and in turn completely obscure the condition of the pelvic organs; (2) that in such cases the radical vaginal operation is the only one that need be considered; (3) that puncture is in the highest degree dangerous. To introduce an instrument one knows not where is more than likely to break through the defensive barrier which a purely local inflammation has raised up, and to infect the general peritoneal cavity.

2. *A Case of Tubal Abortion with Unusual Complications.*—Mrs. W., æt. 32, 6-para, came to the Victoria Infirmary Dispensary on 9th May, 1896, complaining of bearing-down pains, painful defæcation, and bodily weakness. Her story was that on the 18th of April, eighteen days after a normal menstrual period, she was seized with intolerable pain in the lower abdomen when in the act of leaving bed in the early morning, and fainted. Pain continued and kept her in bed for a week, at the end of which time uterine hæmorrhage occurred and lasted three days. On several occasions before, she had similar though much milder attacks of pain. I found the uterus movable, anteflexed, softer than normal, but not appreciably enlarged. Right Fallopian tube thickened at isthmus, greatly dilated beyond. Left appendages normal. Diagnosis—Hæmatosalpinx ex graviditate tubaria.

Circumstances prevented the patient from entering the hospital till the beginning of June. Operation was indicated by the persistence of pain. I opened the abdomen on the 4th, and found the following conditions:—

Right adnexæ enveloped in numerous adhesions. Appendix vermiformis, finger-thick and adherent to tumour. Right tube elongated, thickened, and turgid; ostium abdominale open, fimbriæ deeply congested, mucosa hypertrophied. Right ovary as large as a hen's egg, containing pultaceous matter and hair, and in the remaining small segment of normal ovarian tissue a fresh corpus luteum. Left adnexæ normal. Ablation of right adnexæ and vermiform appendix. The patient did well.

We have to note here—(1) The history and signs of intra-peritoneal hæmorrhage from tubal abortion, and the simulation of a hæmatosalpinx by a dermoid ovarian cyst. (2) Earlier and similar, though milder, attacks of pain due to catarrhal appendicitis. (3) The occurrence of tubal pregnancy, and expulsion of the entire ovum eighteen days after a normal menstrual period. Sections of the tube, it is true, do not show decidual cells, but the history, the presence of a recent corpus luteum, and the hypertrophic condition of the tubal mucosa, fully justify the assumption. (4) The disappearance of all traces of hæmorrhage, which, to judge by the marked anæmia of the patient, must have been considerable, within a period of seven weeks.

3. *Congenital Absence of the Portio Vaginalis Uteri and Patency of Gärtner's Duct.*—The last case I shall bring under your notice is that of a girl, aged 21, who came into the hospital in March, 1896, complaining of amenorrhœa. She had never menstruated. The following condition was noted:—External genitals and hymen well developed. Vagina 1½ in. in length. No portio vaginalis uteri. Per rectum, a very small uterus and diminutive tubes and ovaries to be felt. At apex of vagina, two apertures, one median, the other to the right. The point of a probe, introduced into the median opening, passed seven-eighths of an inch in the median plane, and could be felt from the abdomen as at the fundus uteri. A second probe, introduced into the opening on the right, passed upwards and outwards for fully 2 inches, and its point could be felt 1½ inch from the right uterine margin.

The distinctness with which the outlines of the uterus were felt when examining per rectum, the passage of the one probe in the median plane and its recognition at the fundus uteri, while the second passed a much greater distance in an oblique direction, seem to me to suggest that the case was one of a normally formed, though diminutive, uterus, with patency of Gärtner's duct on the right side, and, of course, absence of the portio vaginalis.

III.—THREE CASES OF BROAD LIGAMENT CYSTS.

By Dr. Edgar.

The following three cases of broad ligament cysts, removed by cœliotomy within the past few months, are of some interest:—

Case I.—Miss R., æt. 29, tablemaid, was sent into the Samaritan Hospital by Dr. Thomson, of Irvine, on the 9th of October, 1896. Her complaint was of a "constant crushing pain" in the sacral region, dating from her last menstrual period, four weeks before admission, and of premenstrual dysmenorrhœa of eight years' duration, referred chiefly to the left iliac region and over the sacrum. The menstrual discharge was profuse and clotted. During the whole of each intermenstrual period there was a constant copious discharge, which, according to the patient, was "yellow, like matter." Three weeks before admission there was, soon after a per vaginam examination by her medical attendant, a "gush of blood-stained matter." Menstruation began on the day after admission, and lasted till the 14th.

On examination the uterus was found to be retroposed, but otherwise in normal position. There was a small submucous myoma in the anterior lip of the os. The sound passed 2½ inches; endometrium rough and tender. An elastic, extremely sensitive mass, of fully the size of a walnut, and surrounded by adhesions, was felt in the left ovarian region. In the pouch of Douglas there was another cystic mass of about the same size, but not so tender. On 20th October the uterus was curetted and the small myoma removed, and thereafter patient was kept in bed and douched twice daily. While under observation during the next few weeks both the cystic masses before described were found increasing steadily in size. By the end of December they were each of about the size of a turkey's egg, and there was still a marked degree of tenderness all over the pelvic region, more especially on the left side. Patient was weak, and complained greatly of pain in the sacral and left iliac regions, so much so that she could not remain long out of bed.

It was decided, therefore, to perform cœliotomy. This was done on 6th January of this year. The cyst in the pouch of Douglas was first brought up, and found to be intraligamentous and free from adhesions. As the ovary and tube were normal, the cyst was simply tapped and enucleated, and the peritoneal edges brought together by a continuous catgut suture. The left appendages were then examined and found to be embedded in a mass of adhesions, which were separated with some difficulty. While doing so the cystic mass to the left of the uterus disappeared, and a quantity of dark fluid blood welled up. When the ovary was brought into view it was seen to be flattened out, indicating that in all probability the cyst which had been felt was a hæmatoma of the ovary. It was removed along with the tube of the same side.

Patient made a good recovery. Temperature did not rise above 100°. She menstruated from 7th to 9th of February; not profuse, no clots, and scarcely any pain. She was dismissed on 15th February.

CASE II.—Miss H., aged 27, was admitted to the Samaritan Hospital on 8th October, 1896, complaining of headache, palpitation, and insomnia, and of severe pain in the sacral and left iliac regions, of three years' duration. This pain was constant, but was intensified on exertion as well as by menstruation. Even when lying in bed she was not free from it, and the only posture in which she could get comfortable sleep was the prone position. Menstruation was regular but somewhat profuse, and micturition was very frequent, two-hourly during the day and about four times every night. There was also constipation and straining while at stool.

There is no history of gonorrhœa, nor of childbirth.

For the last three years patient has been under the care of several medical men, who have treated her with pessaries.

On examination the uterus was found somewhat enlarged, markedly retroverted and retroflexed, and displaced slightly to the left side, the fundus to a greater degree than the cervix. There was considerable erosion of the os. Lying above and in front of the uterus, a soft, fluctuant, circumscribed mass of the size of a cocoanut was made out bimanually stretching across the upper segment of the pelvis. In front, as the patient lay on her back, it extended to within an inch of the pubis; behind it was in contact with but not intimately adherent to the uterus; on the right side it reached to within a finger's breadth of the pelvic wall, while on the left side the space between it and the lateral pelvic wall was about an inch. Behind the left portion of this cyst and beside the uterus there was a tense, elastic, and tender mass of fully the size of a pigeon's egg, from which to the cornu of the uterus a firm cord could be felt. Repeated examinations failed to make out the right ovary.

On 2nd November cœliotomy was performed. The larger tumour was found to be a parovarian cyst of the right broad ligament with the ovary flattened out on its wall. It was tapped, and as the Fallopian tube coursing over it was thickened, a chain ligature was applied and the cyst with tube and ovary removed. The smaller mass, consisting of the left appendages matted together and containing a small quantity of thick pus, was also removed. A few adhesions on the right side and a considerable number on the left side had to be broken down.

The patient made a good recovery, and was dismissed on 27th November.

Case III.—Mrs. C., æt. 29. On the 25th of September I was asked down to a small Ayrshire town to see a few gynæcological cases. One of them was Mrs. C. Her obstetric history is rather interesting. Married six years ago, she gave birth to her first child within a year, and to her only other four years thereafter. At her first confinement instruments were used. Both cervix and perineum were lacerated, but no sutures were inserted.

When she fell in the family way the second time she had a severe attack of influenza, and, on rising, found her "womb was coming down," as she expressed it. On the advice of her doctor she called on Dr. W. L. Reid, who wrote to the medical man informing him of the condition of the cervix.

The second confinement came on in due course; the head was found to be presenting, but the first stage was unduly delayed, and the doctor was forced at length to dilate the os with his fingers. After working away for a long time he had to confess himself beaten, and sent for a brother practitioner to help him. The latter examined carefully, diagnosed that labour had advanced to the second stage and that the breech was presenting, delivered the child, and found that its perineum had been torn right through from the vagina to the rectum. He stitched it, and fortunately union was secured by first intention. He did not inform the mother nor the other relatives of the true origin of the injury to the child. After this confinement Mrs. C.'s menstruation was frequent and profuse, the uterus prolapsed slightly, and she was troubled with considerable leucorrhœa and constipation. Latterly she stated that after a motion she always felt as if she had not had complete relief. She also complained of a bearing-down feeling, but she had no pain, and micturition was normal.

On examining her I found the perineum torn half-way back, the vaginal walls lax, the cervix very large and presenting a deep stellate laceration, and the uterus slightly lower in the pelvis than normal and somewhat anteposed, but otherwise normal in position. Behind the uterus there was a tense elastic mass, of the size of a cocoanut, reaching from side to side of the pelvis.

On 8th October she was admitted to the Sandyford Nursing Home. On 10th October, assisted by Dr. Russell and Dr. M'Bryde, I curetted the uterus, and amputated the cervix by the Simon-Markwald method, and then made a transverse incision in the posterior fornix into the pouch of Douglas, so exposing the cyst. This was punctured, brought down by means of forceps, and, as the pedicle was very thin, a figure of 8 ligature was applied, and the cyst removed together with the tube and ovary. A couple of catgut sutures were inserted at either end of the incision and a narrow strip of iodoform gauze inserted. I finally performed Lawson Tait's operation on the perineum, using the continuous catgut suture in layers. The gauze was removed on the third day. The wounds healed by first intention, and patient returned home on the 3rd November.

I saw Mrs. C. on 6th March. She looked and felt well; menstruation has been normal, and uterus is in normal position and freely movable.

As there are so many items on the billet, I shall touch on only one point out of the many raised by a consideration of these three cases—viz., the subject of vaginal cœliotomy. My experience in this respect is limited, but such as I have had has led me of late always to take the matter into consideration whenever I have to perform a gynæcological operation involving cœliotomy.

There is no doubt that the after-treatment is simpler, as there is less disturbance than by ordinary cœliotomy; and there being no risk of hernia, the patient need not remain so long in bed, nor does she require afterwards to wear an abdominal belt. There is no exposure, handling, nor displacement of the bowels, except of course there be adhesions to these parts. Also, as exemplified in the last of the three cases which I have described, other vaginal operations which may be necessary can be performed at the same time.

As regards the respective merits of anterior and posterior colpotomy, it is my opinion that there is a place for both. By the anterior route the uterus can be safely anteverted through the vaginal opening, and so allow the enucleation of fibro-myomata from any part of it, whereas in the posterior operation it cannot be retroflexed through the opening in Douglas' pouch owing to the risk of injury to the bladder. In cases of retroversion, also, the corpus uteri can be fixed to the vagina anteriorly at the end of the operation.

On the other hand, in posterior colpotomy, as Boisleux and Mackinrodt hold, drainage is secured in the best situation should such be necessary, and neither the opening into the peritoneal cavity nor its subsequent closure is so complicated as when the anterior route is chosen. In certain cases, however, I hold that posterior is to be preferred to anterior colpotomy. In the case just described it was surprising how easily the cyst was brought down and removed. Neither in this case nor in others in which I have performed posterior colpotomy has there resulted any posterior perimetritis, with all the evils attendant thereon hinted at by Dührssen.

Prof. Murdoch Cameron, referring to the small size of one of the cysts removed, said that it was doubtful if it was advisable always to operate when a small pelvic tumour was discovered. In his experience such cysts sometimes disappeared, and he mentioned a case of a larger tumour that was now under his observation, and was getting less. A great many of these broad ligament cysts did well with puncture. He had had many of such cases, some of which he knew to be doing well after two or three years.

Dr. Edgar, in reply, said that the cyst had shrunk greatly since the operation, but that he operated not on account of the presence of the tumour but because of the condition of the patient. He listened with interest to the remarks on puncture; but he considered vaginal puncture a hap-hazard method, and would prefer cœliotomy and then puncture.

IV.—A CASE OF DERMOID CYST OF BOTH OVARIES, THE LARGER STRANGULATED OWING TO TORSION OF ITS PEDICLE, THE SMALLER SIMULATING A SACTOSALPINX IN SHAPE.

By Dr. Edgar.

Mrs. K., æt. 29, was seen by me on 14th December, 1896, in consultation with Dr. Stevenson, of Motherwell. She was admitted into the Samaritan Hospital on 17th December. At that time the following particulars were noted:—Married seven years; four children, last thirteen months ago, still nursing. After her last confinement the swelling of the abdomen did not diminish as much as usual. She made a good recovery, and was up on the fourth day. Up till June patient thinks the swelling did not increase, but since then it has steadily grown.

Menstruation was re-established last June, and has been accompanied with severe pain, so severe indeed that on two occasions she has had to call in her medical attendant. There had never been previously any dysmenorrhœa.

For the last eight days there has been constant severe pain and tenderness in the umbilical and right iliac regions.

Patient's general health has failed greatly during the last six months. At present her face is thin and anæmic, eyes hollow, pupils dilated, and expression anxious. Micturition and defæcation are normal.

On examination the abdomen is found to be very tender, and is occupied by a smooth, tense, rounded mass, reaching from the pelvic brim up to an inch above the umbilicus, which is prominent and extending on the right side to the anterior iliac spine, on the left side to 2 inches within the left iliac spine. Owing to the tenderness the question as to the mobility of the mass cannot be properly ascertained. Fluctuation, however, can be made out.

The uterus is slightly retroverted and distinctly lateroverted to the right. The cervix is lacerated bilaterally, and there are both erosion and ectropion. To the left of the uterus an apparently coiled, sausage-shaped, tense, and slightly tender mass can be felt.

Cœliotomy was performed on the 22nd of December, 1896. The peritoneum was greatly thickened and was adherent to the anterior surface of the underlying cyst. On piercing the cyst dark-red fluid came away. The omentum, small intestine, and cæcum were found adherent to the pedicle and lower surface of the tumour. On turning the cyst out of the abdominal cavity it was found to have rotated twice completely (four half-turns) from right to left, and was in consequence quite strangulated. The surface was mottled, fully half of it being perfectly black. The wall was a third of a centimetre in thickness, except where here and there large patches of extravasated blood had separated its layers. The contents consisted, with the addition of the blood-stained fluid already mentioned, of a soft pultaceous mass, and fully a hundred small globular masses of sebaceous material of the size of hazelnuts and each containing a short fine hair. The layers of the mesosalpinx were completely opened out. The portion of the Fallopian tube removed with the cyst was 11 cm. in length and 1·4 cm. in thickness.

The smaller mass was next removed, and found to consist of a small multilocular cyst of the left ovary of a peculiar retort shape. It was smooth, irregularly lobulated, and of a pearly lustre. The inner cylindrical portion measured 3 cm. by 1·6 cm.; the outer bulbous portion measured 4 cm. in length, 4 cm. vertically, and 3 cm. from before backwards. On opening the cyst some of the loculi were found to be filled with clear gelatinous material, some with sebaceous matter, and one with hair. A microscopic section shows epidermis, hair, adipose tissue, and cartilage.

The portion of the Fallopian tube removed with the cyst was apparently healthy, and the mesosalpinx was not encroached upon.

Patient made a good recovery, and was dismissed on 9th February.

Prof. Murdoch Cameron said that Dr. Edgar's case was specially interesting to him, as he (Dr. Cameron) had recently shown to the Society two ovarian dermoids removed from the same patient, and also two wax models showing the condition of the specimens when fresh, as one of these also had become strangulated.

Dr. Balfour Marshall asked if there was only one cyst with hair, as one of the tumours was described as being multilocular, while true dermoids, of course, were unilocular.

V.—VESICAL CALCULUS AFTER CÆSAREAN SECTION.

BY DR. A. W. RUSSELL.

The occurrence of vesical calculus after Cæsarean section, owing to wandering of a suture, has been already demonstrated to the Society by Prof. Murdoch Cameron, but it seemed to Dr. Edgar, Dr. Bell Todd, and myself that a second instance which had come under our observation and treatment deserved to be recorded. As the first case had been under my care at the Western Infirmary Dispensary before being sent to Professor Cameron, I undertook to bring the present case under the notice of the Society and show the specimens. Mrs. B., æt. 27, came to the Dispensary of the Samaritan Hospital on 30th April, 1896, complaining of excessive, frequent, and irregular menstruation. Admission into the hospital was proposed, and in the meantime ergot was ordered. She did not continue the treatment, and only returned to the dispensary on 6th August, when it was found she had not improved. Her menstrual history showed that menstruation began at 12½ years of age, and was regular in every way up to the time of marriage five and a half years ago. Her first pregnancy was terminated at full time by Cæsarean section in the Maternity Hospital on 15th March, 1892, Professor Cameron being the operator. In passing, it is interesting to note that menstruation was never regular after this operation. While her child was at the breast she had a hæmorrhage at six months. This recurred three weeks later and lasted for a fortnight. She became subject to these hæmorrhages, and on this account saw Professor Cameron eighteen months after her operation. He prescribed, but she did not improve, nor was she relieved by any other treatment tried during the following two years or more. A year ago she was under treatment for a severe "sickening" pain in the left side. She always had a similar but less severe pain with the hæmorrhage. Micturition after the operation was usually more frequent than formerly, sometimes as often as three times during the night, and there was a little pain before the act, but she had not complained specially of any urinary symptoms until the end of December, 1896, when micturition became still more frequent, and blood was seen in it, and there was a thick sediment. By this time she had applied for admission into the hospital, but in the meantime Dr. Bell Todd was called, and prescribed for relief of the urinary symptoms. A week later, during micturition, a hard pointed substance, which she thought she had felt for several days, presented at the urethral meatus. She consulted Dr. Illingworth in this emergency, and he, finding this body was the tip of a calculus, endeavoured to remove it, but it broke across about three quarters of an inch up the canal. She was afterwards admitted into the Samaritan Hospital under Dr. Edgar's care, and, under chloroform, the urethra was dilated, the rest of the calculous formation, the greater part of which was adherent to the posterior wall of the bladder, was removed. The uterus was at the same time curetted. The calculus consisted mostly of soft phosphatic concretion, which crumbled away very readily during removal, but several harder fragments were obtained that had as their nucleus a piece of twisted silk suture, and two of them had formed round a knot. The treatment was continued by antiseptic douching of the bladder, and before the patient left the hospital a cystoscopic examination by Dr. J. H. Nicoll proved that though the posterior wall had not completely healed up there was no more calculus.

Prof. Murdoch Cameron reminded the Society of the details of the case he had previously reported (*vide Glasgow Medical Journal*). The incision at the time of the Cæsarean section had been carefully limited to the uterine wall, but the lower stitches had doubtless been inserted deeply into the tissue between the uterus and the bladder, and they must have wandered gradually in the direction of the bladder.

Dr. Bell Todd corroborated the details of the case as given by Dr. Russell.

Dr. Balfour Marshall referred to three cases where silk sutures had passed into the bladder after vaginal fixation.

Dr. Oliphant gave up using silk in Cæsarean section, and he thought Dr. Cameron had used catgut for a while. Was this owing to dissatisfaction with the silk?

Dr. Cameron, in reply to Dr. Oliphant, said that he had had ten cases of Cæsarean section without a death, in all of which he had used silk.

VI.—A CASE OF PUERPERAL TOXÆMIA IN WHICH THE ANTISTREPTOCOCCIC SERUM WAS USED.

BY DR. A. W. RUSSELL.

The special interest of the following case lies in the fact that marked symptoms of mental derangement developed, and that the use of the antistreptococcic serum was followed by rapid improvement in these as well as all the other symptoms, and ultimate complete recovery resulted.

Mrs. C., æt. 28, a primipara, of healthy constitution and average physical development, but of nervous temperament. The labour was practically normal, but there was pretty severe hæmorrhage during the expulsion of the placenta, as at one part it seemed to be detached with difficulty. The placenta was inspected, and both it and the membranes were found to have been completely removed. Instruments were not used, nor was there any vaginal examination without thorough washing of the hand and immersing it in a strong solution of corrosive sublimate, with which also the external parts and vulvar surfaces were frequently sponged by means of wool pads. No vaginal douche was given. There was a slight superficial laceration of the perineum, but this quickly healed up.

A full teaspoonful of the liquid extract of ergot was given after the expulsion of the placenta. The temperature remained normal on the second day, but she complained of pain in the left side, to which hot plates were applied by the nurse. Several clots were passed. It was noted that the patient had never rallied, but looked depressed, and was unduly emotional when the child was put to the breast and irritable when it cried. On the third day the napkin was reported to have an odour, and the temperature had risen to 100·6°. Castor oil and an antiseptic vaginal douche were ordered. Quinine was also given. On the fourth day the temperature was over 102°, and I douched both the vagina and the uterus with the usual precautions. Vaginal examination gave no clue to the site or source of the infection. The evening temperature was 103°, but on the following morning it was reported to be under 100°, and the patient improving. Dr. Dickson saw the patient for me on the fifth and sixth days. On the fifth he found the temperature to be about 103°, but on the sixth she seemed to be improving. Later on, however, an urgent message came to him, and he found her greatly excited and striking about her. She refused either food or medicine. An enema of bromide was given.

On the seventh day the temperatures were 103·4° and 104°, but she was now rational though depressed, and she took nourishment and stimulant given. Quinine was continued. On the eighth and ninth days the temperature was lower but still over 100°. On the tenth day it rose to 103°, and phenacetin was given as it did not fall on the eleventh day. The pulse all this time was regular and never over 100. About the end of the thirteenth day she fell into a low condition of religious melancholy, refusing all forms of nourishment or treatment. The temperature averaged 103°, and the pulse was now over 120. The question of serum treatment was now (the fourteenth day) raised, and, after consultation with Dr. W. L. Reid, 5 c.c. of Marmorek's antistreptococcic serum were injected and sulphonal (15 grs.) was given. There was little influence on the temperature, but patient was a little brighter on the fifteenth day, when 5 c.c. were again injected. On the sixteenth and seventeenth days 10 c.c. were injected at a time, and the temperature gradually fell. On the eighteenth day the temperature was 99·2°, but on the nineteenth day it again rose to 104°, and another injection of 10 c.c. was given. On the twentieth day the temperature was 101°, and 10 c.c. were again injected. On the twenty-first day the temperature was normal, and convalescence was afterwards uninterrupted, although for some time she was liable to nervous depression. Careful vaginal examination about two months later showed that the parts were again normal, except for a moderate laceration of the cervix on the left side.

Dr. J. Coulson Howie referred to the precautions taken in the Rotunda Hospital for the prevention of sepsis.

Prof. Murdoch Cameron suggested that the effect of the ergot might have been by uterine contraction to retain clot, which would be a good medium for the growth of septic organisms. It was possible, also, that the patient might have recovered without this treatment. He thought that in such cases the uterus should be carefully curetted, as it was not possible otherwise to say that every fragment of placenta or membrane had been removed.

Dr. Edgar related a case which he had seen in consultation. The patient was a primipara, æt. 40, and the birth was premature at about seven and a half months. There had been accidental hæmorrhage. Delivery was normal, neither cervix nor perineum being lacerated, and the placenta and membranes being entire.

On the third day there was slight pyrexia, and an intra-uterine antiseptic douche was given. On the sixth day the temperature was, morning 102·4°, evening 103·1°, and pulse 160. He was called in on this day, and found a small submucous myoma with particles of placenta adherent to it. There was slight fœtor. The uterus was curetted, douched, and packed with iodoform gauze. On the seventh day the temperature was normal in the morning and early evening, but at 9 P.M. there was a severe rigor, and the temperature rose to 103°; at midnight it was 104·2°, and pulse was 160. Antipyrin and quinine were given without effect. On the eighth day the temperature at 2 A.M. was 104·6°; 10 c.c. of the serum were injected at 2 A.M., and by 4 A.M. it had fallen to 99·8°, and the patient soon fell asleep. By 11 A.M. it had risen to 103°, and another injection of 10 c.c. was given. At 4·10 P.M., the temperature being 102°, a third injection was given, and a fourth at 9·50 P.M. About midnight the temperature was 100°, and on the following morning (eighth day) it was practically normal. On this and the ninth day the temperature varied between 99° and 100°, but on the tenth day the evening temperature was 103·6°, and pulse 140. Vaginal examination now showed an exudation to the right of and behind the uterus. Another injection was given at 11·35 P.M., and at 8·15 A.M. of the tenth day the temperature was 99.8°. The sixth injection was now given, and the temperature remained at normal till late in the evening, when it rose to 103·8°, and the seventh and last injection was given, the temperature by the following morning falling to and remaining afterwards practically at normal. The fall of temperature in this case and the improvement of the pulse were very remarkable, but even more striking was the sense of relief experienced and expressed by the patient. The serum was injected into the back between the scapula and the spine, and no trouble whatever had resulted.

Dr. Jenkins said that no note was given regarding the condition of the bowels, and suggested a possible explanation of the improvement in the condition by a purulent collection in the pelvis being discharged through the bowel.

Dr. Balfour Marshall asked as to the extent of the local treatment.

Dr. Russell replied that the bowels had at no time given trouble, and that the evacuations had been watched. With regard to local treatment, the vaginal douche had been used regularly after the temperature rose, and an intra-uterine douche was given in the first week, but after beginning the serum treatment all other treatment was suspended.

REVIEWS.

The Sequels of Disease, and Prognosis. By Sir Dyce Duckworth, M.D., LL.D. London: Longmans, Green & Co. 1896.

There are at least two aspects in which diseases may be regarded. In the first place they present a series of phenomena, the cause, order, and relationships of which demand investigation. In the second place they are conditions which interfere with the comfort and activity of the individual, modify his present actions and future plans, and call for practical consideration in all these respects. Sir Dyce Duckworth, in the lectures he has here republished, has had both of these points of view clearly before him, and from his considerable experience and wide reading has brought together a collection of facts and observations of very great interest and value. Before we can enquire into the reason why each diseased condition has its own special subsequent events we must know what those events are, and in these lectures that knowledge is provided. And the provision is not only complete as a mere statistical statement, but the facts are so arranged and commented on as to carry with them valuable and suggestive significance. The volume in this respect is full of interest. It is likely also, we think, to prove of great practical value. Every physician has his own experience of exceptional events occurring in patients both during and after recovery from illnesses in other respects normal and commonplace. To compare this experience with published records means so large an expenditure of time that it is apt to be neglected. But taking these lectures as a basis, all may add their contributions in the light of previous experiences. The industry of the author will thus, we trust, be the cause of industry in others, though few may hope to emulate the keenness of his insight or the breadth of his mental grasp.

In the lectures on prognosis Sir Dyce Duckworth displays equal thoroughness in collecting facts and skill in pointing out their significance. He is rather disposed to think that the art of prognosis is unduly neglected both in the education and practice of the present day. Certainly he provides here a stimulus to its cultivation both on scientific and utilitarian grounds, and we shall be surprised if the practical value of this volume is not widely recognised. The task of offering a fair estimate of the outlook for a patient is one of the most difficult and responsible duties of the practitioner. It concerns his own reputation as well as the welfare of the patient. Because these lectures offer skilled and definite assistance in the discharge of that duty, as well as for their scientific interest and lucid style, we cordially recommend them to the attention of our readers.

Herbal Simples approved for Modern Uses of Cure. By W. T. FERNIE, M.D. Second Edition. Bristol: John Wright & Co. 1897.

IT is impossible to deny the interest, and even charm, of this collection of facts, statements, and stories concerning the various vegetable substances which have at different times been credited with therapeutic virtues. The compilation of the volume has evidently been a labour of love; and, though in many cases we cannot share the author's faith—not to say credulity—his manifest affection for his task, the grace of his diction, and the abundance and appropriateness of his literary references are very pleasing. The book deals with some four hundred herbal simples, and with the traditional compliments paid to them. Such compliments appear in the view of the author to be for the most part deserved; but one cannot say that he submits convincing evidence for the faith that is in him. At the same time he is tremendously in earnest, and issues his volume with a conviction of its "supreme usefulness" and "its almost sacred mission"—this conviction apparently arising from his acceptance of "the literal truth of the scriptural account of the Garden of Eden," with the necessary inference that "man's welfare from the first was made to depend on his uses of trees and herbs." He is equally confident of the truth of "the law of cure by medicinal similars." It is not therefore very surprising to find a statement in the preface to the effect that certain American mineral waters "are effective to cure cancer, albuminuria, and other organic complaints," or to read in the body of the work of a case of cancer cured by red clover, on the authority of the *New York Tribune!* We cannot accept Dr. Fernie's view of the supreme usefulness of his work; but we are grateful to him for a volume full of interest, and distinguished by considerable literary charm.

Influenza, with Special Reference to some Peculiar Symptoms. By WILLIAM GRAY, M.D. London: H. K. Lewis. 1897.

THIS small volume is worthy of high commendation. It is the result of a clinical study of the subject of influenza, and as such its merits demand recognition. The historical and pathological relationships of the disease are discussed in an interesting chapter; but the main part of the book is devoted to the symptoms of the disease, and to its practical management by the physician. Dr. Gray has used his opportunities well, and his published study is both a valuable contribution to our knowledge of the disease and a useful guide to his professional brethren. In these days of research laboratories and microscopic investigation it is refreshing to meet with a practical essay the result of bedside observations conducted amidst the demands of general practice. The definite and confident results of pathological and bacteriological investigations have by no means rendered unnecessary the less definite, but possibly more immediately serviceable, pursuit of the clinical study of disease. The essay now in question is an admirable illustration of this statement. We would suggest to Dr. Gray the advisability of adding an index in his second edition.

Practical Manual of Diseases of Women and Uterine Therapeutics. By H. MACNAUGHTON-JONES, M.D., M.A. Seventh Edition. London: Baillière, Tindall & Cox. 1897.

IN spite of the fact that the sixth edition of this work was published only two years ago, the author has done much in the way of revision and the addition of new material. A short chapter is devoted to the subject of "Deciduoma Malignum," a disease which had hardly begun to attract attention in this country two years ago. A short account is given of the symptomatology, while several pages are given to a description of the microscopical appearances of the tumour. At the end of this chapter is a full list of the bibliographical references.

The chapters on the operative treatment of fibroid tumours of the uterus are specially full and valuable. The operations are well classified, and the more important methods of performing hysterectomy are given with great detail. Throughout the book reference is made to recent foreign work, and the opinions of Continental gynæcologists are quoted freely. References are given fully in footnotes.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

PHYSIOLOGY.

BY WILLIAM SNODGRASS, M.A., M.B., C.M.

An Oxydising Agent in the Hæmolymph of Crustacea.—MM. Abelous and Biarnès find a substance with the characteristic properties of the oxydising ferments in the blood and some of the organs of crustacea. It is soluble in water, and precipitable by alcohol; its action is accompanied by absorption of oxygen and the production of carbonic acid; it is not suppressed by a temperature of 60°, by chloroform, nor various antiseptics, but is destroyed by a temperature of 100°. The presence of acids, especially mineral acids, weakens its action.—(*Archiv. de Physiol. Norm. et Patholog.*, April, 1897.)

Hæmapoetic Function of the Spleen.—J. Laudenbach finds (*Archiv. de Physiol. Norm. et Patholog.*, April, 1897) that the spleen takes part in the formation of hæmoglobin and in the maturation of the coloured corpuscles of the blood, and after the extirpation of the spleen there is a marked diminution of these elements of the blood. The quantity of hæmoglobin always diminishes more than that of the coloured corpuscles when anæmia develops. The alterations of the blood begin some time after the removal of the spleen, and attain a maximum in about three or four months.

Thereafter the blood gradually returns to a more normal condition, showing that other parts of the organism take up the function of the absent spleen. This compensation, however, is not always complete, and after repeated bleedings the return towards the normal condition is more and more retarded. The compensation may be so defective as to lead to the death of the animal from anæmia. After removal of the spleen there are very marked alterations of the bone marrow in the way of producing more and more coloured corpuscles.

Action of Infused Beverages on Digestion.—Fraser gives in the *Journal of Anat. and Physiol. Norm. and Patholog.* for July, 1897, the results of an extensive series of experiments on the above subject. He concludes that infused beverages, as a rule, retard the peptic digestion of albuminoid food stuffs—coffee the least, and cocoa the most. Breakfast meats (eggs, salted meats, &c.) and the vegetable albuminoids are the least hindered in digestion, and some are assisted. The active agent in producing this retardation is chiefly the tannic acid, which coagulates uncooked albuminoids, tans the gelatinous matter of meat, and precipitates the syntonin and peptones as formed. In tea it retards the conversion of syntonin to peptone. All the beverages retard the consumption of acid during digestion. They appear not to affect the tryptic digestion of albuminoids or starches. The breakfast, if these beverages are taken, should consist of vegetable food and "breakfast" meats, and in illness, in dyspeptic states, the use of these beverages with meats whose digestion they retard is to be avoided, whether the dyspepsia arise from stomach atrophy, hyperacidity, or from flatulence.

Pigments of Crustacea and of Micro-Organisms.—Newbigin contributes to the *Journal of Physiology*, May, 1897, the results of observations on the pigments of crustacea. He finds that the colour variations of crustacea can all be referred to chemical variations on the yellow hepatochrome of the liver, which forms the central pigment of the group. This may be modified into a red lipo-chrome, which may directly colour the shell, or may in association with lime give rise to an orange colour. The red lipochrome may further unite with an organic base to form a blue pigment, while a mixture of this blue pigment with unaltered yellow gives rise to a green colour.

The alteration in the colour of pigments in living beings—plants or animals—is a subject of much interest as evidence of molecular changes which seem to be most closely associated with the function of respiration. In this connection the observations of M. George Thiry (*Archiv. de Physiol. Norm. et Patholog.*, April, 1897), on the polychromic bacillus found in well-water, deserve attention. This bacillus, with slight variations of the conditions of culture, will produce the most varied coloured pigments—indigo, green, red, violet, yellow. The power of producing varying pigments is analogous to that of forming varying toxins, according to diverse conditions of life, and yet without fundamental alteration of the primitive type.

MEDICINE.

By WALTER K. HUNTER, M.D., B.Sc.

Use of the Roentgen Rays in Medicine.—Dr. Bianchi (*La France Médicale*, 5th and 12th February, 1897) has found the Roentgen rays of great service in cases of pleurisy with effusion. By their means he has been able to demonstrate the quantity of fluid present, its levels on changes of position and on deep inspiration, as well as its relationship to neighbouring organs. The amount of movement of the lung both on the affected and on the sound side, displacements of the mediastinum, heart, and diaphragm, can all likewise be observed. When the fluid has become absorbed or drawn off, he uses the "rays" to show the amount of expansion in the collapsed lung.

Dr. Ch. Bouchard (*La France Médicale*, 8th January, 1897) has been able to demonstrate with much exactitude enlarged bronchial glands and aneurysms of the arch of the aorta. Dr. Bergonié (same paper) has in like manner determined consolidations and cavities in the lungs.

Prof. Benedikt (*Le Progrès Médicale*, 3rd April, 1897) has by means of the Roentgen rays studied the movements of the heart. He notes the following :—The heart only evacuates a part of its contents during systole. During systole the apex of the heart is drawn up and to the right, and not downwards and to the left as Skoda taught. In the child, the heart's long axis is almost horizontal; in later years the apex is directed more downwards. In hypertrophy of the left ventricle the apex is displaced still more downwards, so as in some cases to make the axis almost vertical. In hypertrophy of the right ventricle the position is again more or less horizontal. When the left ventricle undergoes an excessive hypertrophy the heart turns on its long axis so that the right ventricle comes in front. Normally, the great vessels at the base of the heart are not visible in the skiagram, but when there is an aneurysmal enlargement these vessels may be seen. In this way aneurysm in an early stage may be recognised. Prof. Benedikt uses the Roentgen rays in asthma to note the condition of the lungs during the paroxysms of that disease.

Dr. Poucet (*Bul. de l'Acad. de Méd.*, 29th December, 1896), in pursuing his anatomical researches on the circulation of the blood in the kidneys, injected these organs with certain metallic substances. By this means the vessels could easily be defined in the skiagram.

Contagion in Regard to the Origin of Infectious Diseases.—Dr. Kelsch read a paper on this subject before the Académie de Médicine, on 1st December, 1896. Dr. Kelsch maintains that the study of infectious diseases, as carried on in the bacteriological laboratory, tends to give to direct contagion far too much importance, and he says that we cannot expect to find in nature the precision of infection and the rigour of conclusion as applied in the laboratory. According to present opinion, an epidemic disease develops and is propagated by immediate and mediate contagion, and one epidemic in regard to its origin, in some way or another, is referred to the one which preceded it. But there are numerous instances in which an epidemic disease, *e.g.*, typhoid fever, appeared suddenly in a district where, in the memory of man, it was before quite unknown, and where no evidence existed to show that it could have been received from without. There are many cases of typhoid where it is impossible to explain how the typhoid bacillus obtained entrance into the body. Diphtheria had almost disappeared during a period of about two hundred years, when in 1860 it showed itself again. Influenza, formerly sporadic, has now acquired an epidemic character. So that while giving due importance to contagion as a means of spreading disease, it is evident that it can by no means explain all the cases which come under our consideration. Dr. Kelsch, therefore, maintains that contagious diseases can develop without contagion, and that there are many undoubted facts to prove it. Bacteriology shows that the micro-organisms of many of the infectious diseases live as saprophytes in our bodies or outside of them; and that for some reason or another they may acquire a virulence which makes them produce their characteristic disease. The outbreaks of cholera and diphtheria cannot be explained otherwise than by the benign forms of their micro-organisms taking on virulent characters. The epidemics are too simultaneous and spontaneous—and this in districts far apart—to be explained by importation. The disease must originate in the districts themselves. The virus which gives rise to sporadic cases is probably feebly virulent, and will, therefore, only affect the few people who are very susceptible.

Prophylaxis then is most important in the treatment of infectious diseases. The individual should live in the best hygienic conditions, so that the resistance of his tissues may be augmented. The surroundings, too, must be such that the virus in growing will not become pathogenic.—(*Bul. de l'Acad. de Méd.*)

Jaundice Accompanying Epilepsy.—Dr. Féré reports in *Le Progrès Médicale* (12th June, 1897) the following case:—The patient, aged 49, belonged to a neurotic family. She herself had an attack of eclampsia at her first confinement (she was then 21), but since that time there had been no other disorder of the nervous system till epileptic convulsions set in two years ago. A fortnight previous to the first convulsion, patient had got a severe fright. The "fit" itself presented the typical epileptiform characters, but it was accompanied or followed by an attack of obstructive jaundice. For three months following this, patient had an epileptic seizure once a fortnight, usually coming on at night after a few hours' sleep. Following each fit there appeared the jaundice, which could be noted within a few hours of the onset of the fit. The signs of the jaundice disappeared in a few days. Under treatment the frequency of the fits lessened, but still jaundice accompanied each seizure. Dr. Féré considers the jaundice in the above case to have the same explanation as the jaundice following mental emotion, of which many cases have been recorded.

DISEASES OF THE EAR.

BY DR. WALKER DOWNIE.

A Case of Acute Primary Mastoiditis, Bilateral, without Ascertainable Cause, is reported by Marcus Kenyon, M.D. The patient, a woman, aged 22, had had slight pain in the left ear, followed by moderate tinnitis, vertigo, and impaired hearing. Objective symptoms were those of early sclerosis of the middle ear, and inflation, &c., was recommended. Pain, however, returned, and affected not only the ear, but the left mastoid, temple, and side of head generally, and there was tenderness at apex of mastoid. Pain increased, temperature rose, and operation was determined upon. Following the usual mastoid incision, the bone generally was observed to be sound except over the antrum, where the bone was red and softened. The antrum was opened, and wound healed satisfactorily. One month after implication of left ear, the right became similarly affected, and was treated in the same fashion as the left ear, with similar results. The operations were followed by improvement in general health and disappearance of tinnitis and vertigo.—(*The Laryngoscope*, May, 1897.)

THE *Archives of Otology* for April, 1897, opens with a report of the fifth meeting of the German Otological Society, held twelve months ago at Nürmberg, and this is followed by a report of the proceedings of the section on otology, at the sixty-eighth meeting of the German naturalists and physicians, held at Frankfort on the Main, in September, 1896. At both of these meetings many interesting subjects were discussed, notes of which will be found in the above reports. The original papers in this number are numerous, and all more than usually interesting and instructive. Amongst them the following may be referred to:—

"A Case of Tubercular Caries of the Middle Ear Perforating the Fenestræ Rotunda and Ovalis," by Dr. Waller Hænel, Dresden.—The patient was three months old, and its mother had died of galloping consumption shortly after its birth. The patient had right muco-purulent discharge, was badly nourished, and had enlargement of cervical glands on both sides, and total paralysis of right side of face. The right auditory meatus was filled with pus, pale granulations surrounded the small bones and remnants of the drum-membrane, and bare bone was detected by the probe on inner wall of tympanum. Necrosed malleus was removed by syringe, and granulations removed. Child weak and ill-nourished, rapidly sank. At *post-mortem* inspection, acute miliary tuberculosis of the lungs, liver, and spleen, starting from old cheesy tubercular cervical, thoracic, and mesenteric glands, were revealed.

The temporal bone was removed and carefully examined. The meatus and tympanum were filled with foul discoloured pus, in which isolated tubercle bacilli were found. The membrane, malleus, and incus were absent, the normal mucous membrane of the tympanic cavity was entirely destroyed, areas of roughened exposed bone were seen, and the apex of the promontorium was entirely absent, and granulation tissue projected from the fenestræ rotunda.

Sections in the immediate neighbourhood of the fenestræ rotunda showed granulation tissue covering the floor of the scala tympani, but the farther away from the scala the sections were taken, the less granulation tissue was present.

The fenestræ rotunda appeared to be the channel by which infection reached the labyrinth, the changes in the internal ear being confined to the neighbourhood of the fenestræ rotunda and ovalis; the auditory nerves were unaffected.

In a statistical paper "On the Pathological Conditions in the Middle Ear and Sphenoid Sinus in True Diphtheria," Dr. E. Lommel holds that the ear is implicated in 96 per cent of all cases of true diphtheria, and that it is highly improbable that the process in the middle ear is simply an extension from the pharynx by way of the tube, but rather that it is an affection of the bony cavities of the middle ear accompanying diphtheria, and that the identical relations exist which Bezold demonstrated in his researches in other infectious diseases.

The temporal bones in all the cases (24) reported upon were dissected by Prof. Sieberman, and the author thinks that this contribution on the subject proves that these affections, in the great majority of cases, do not represent a genuine disease, but occur as one of the symptoms of a general infection.

"A New Method of Treating (by Digestive Ferments) Deafness due to the Sequels of Catarrhal and Suppurative Inflammations of the Tynpanum," by Dr. Cohen Kysper, Hamburg.—One of the most intractable forms of deafness is that described as chronic catarrh, dry catarrh, sclerosis, and otitis media adhesiva, in which there are certain proliferative changes, followed by degenerative changes leading to shrinking, hardening, and thickening of the tissues involved. Dr. Kysper's aim is to introduce into the middle ear solutions of ferments, having the power to dissolve albumen, for the purpose of inducing a process of digestion of the hyperplastic material as well as of the connective tissue products; to dissolve them or lessen their size, and thereby render the conduction of sound more easy. The pepsin which acts most rapidly is that of the carnivorous dog, and this he employs in the proportion of 1 to 10,000, with ·15 per cent hydrochloric acid added. The solution must be chemically pure, and passed through a bacteria filter before use. He employs a Koch's syringe, modified to meet the requirements of ear instruments, and he injects from 2 to 3 decigrammes according to the size of the drum head. The tympanic membrane is punctured by the needle where most prominent. The injection is followed by an actual digestion of cicatricial tissue, for within a very short time improvoment takes place—"the hearing improves five-fold, and remains there." In some cases, however, there may be a decrease in hearing power, which is followed by improvement later. One hundred and fifty cases of chronic catarrh in all were treated, including forty in which it was bilateral. Eighty cases were treated with injections of pepsin solutions, the others with other ferments. The number of cases improved is said to have been more than two-thirds of the total number treated.

A paper "On the Conducting Portion of the Labyrinth," by Arthur H. Cheatle, F.R.C.S., London, and another, by the same author, "On a Case of Congenital Auricular Sinus with Recurring Inflammation," on which he operated, complete the list of purely aural contributions, and they are followed by the usual systematic report on the progress of otology for the previous quarter.

Books, Pamphlets, &c., Received.

Lectures on the Action of Medicines, being the Course of Lectures on Pharmacology and Therapeutics, delivered at St. Bartholomew's Hospital during Summer Session 1896, by T. Lauder Brunton, M.D. London and New York. 1897. (10s. 6d. net.)

The Edinburgh Medical Journal, edited by G. A. Gibson, M.D., F.R.C.P. Ed. New Series. Vol. I. Edinburgh and London: Young J. Pentland. 1897.

The Menopause, by Andrew F. Currier, M.D. New York: D. Appleton & Co. 1897.

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The Pocket Therapist, by T. Stretch Dowse, M.D. Bristol: John Wright & Co. 1897. (5s. net.)

Royat Medical Guide, by G. H. Brandt, M.D., and J. E. Brandt, M.D. Fourth Edition.

Diet Chart and Alimentary Index, suggested by M. J. Kenny, L.R.C.P. Ed. Bristol: John Wright & Co. 1897. (1s. 6d. net.)

A Retrospect of Medicine, edited by Jas. Braithwaite, M.D. Lond., and G. F. Trevelyan, M.D. Lond. London: Simpkin, Marshall, Hamilton, Kent & Co. 1897.

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Eye Strain in Health and Disease, by Ambrose L. Ranney, M.A., M.D. With Thirty-eight Wood Engravings. Philadelphia: The F. A. Davis Co. 1897. (2 dols. net.)

Convergent Strabismus and its Treatment: an Essay, by Edwin Holthouse, M.A., F.R.C.S. London: J. & A. Churchill. 1897. (6s.)

A System of Medicine by Many Writers, edited by Thomas Clifford Allbutt, M.A., M.D., F.R.S. Vol. III. London: Macmillan & Co. 1897. (25s. net.)

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GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 24TH JULY, 1897.

	WEEK ENDING			
	July 3.	July 10.	July 17.	July 24.
Mean temperature, . .	60·5°	55·3°	62·2°	61·9°
Mean range of temperature between day and night, .	16·3°	10·8°	29·7°	20·9°
Number of days on which rain fell, ...	2	4	...	4
Amount of rainfall, . ins.	0·08	0·79	...	1·40
Deaths registered, . . .	261	230	214	276
Death-rates, ...	19·0	16·7	15·6	20·1
Zymotic death-rates, . .	2·6	2·5	2·4	3·5
Pulmonary death-rates, .	4·7	3·8	3·7	4·3
DEATHS—				
Under 1 year, . . .	57	52	47	73
60 years and upwards, .	39	39	40	47
DEATHS FROM—				
Small-pox, ...	...	...	...	...
Measles, ...	3	2	...	4
Scarlet fever, ...	2	2	2	3
Diphtheria, ...	2	...	1	...
Whooping-cough, . . .	10	6	12	19
Fever, ...	9	5	3	2
Diarrhœa, ...	10	19	15	20
Croup and laryngitis, .	...	...	...	...
Bronchitis, pneumonia, and pleurisy, ...	38	30	29	38
CASES REPORTED—				
Small-pox, ...	...	1	1	...
Diphtheria and membranous croup, ...	7	2	5	6
Erysipelas, ...	16	9	13	18
Scarlet fever, ...	38	25	22	35
Typhus fever, ...	...	...	...	...
Enteric fever, ...	15	16	9	14
Continued fever, . . .	...	...	...	...
Puerperal fever, . . .	1	2	1	1
Measles,*	47	26	30	36

* Measles is not notifiable.

SANITARY DEPARTMENT,
GLASGOW, *28th July, 1897.*

THE

GLASGOW MEDICAL JOURNAL.

No. III. SEPTEMBER, 1897.

ORIGINAL ARTICLES.

TWO COMPARATIVELY RARE CASES OF ACCIDENT.

BY D. MACARTNEY, M.A., M.D.,

Surgeon to the Cancer Hospital, Glasgow; Dispensary Surgeon to the Western Infirmary, Glasgow.

1. *Rupture of Right Ligamentum Patellæ.*—C. M'P., æt. 54, lamplighter, belonging to Govan, was admitted to Ward XIV, Western Infirmary, on 4th December, 1895, suffering from injury to his right knee. While cleaning a stair lamp he fell from his ladder and struck his knee on the stone landing. He was brought to hospital in an ambulance waggon.

On examination the knee-joint was found to be much swollen, the patella intact and drawn up the thigh some inches.

The limb was fixed on a Macintyre splint for a week, and then patient was taken to the theatre for operation. After the part had been shaved and cleansed, chloroform was administered. An incision, 6 in. long, was made over the middle of the patella in the length of the limb, and the parts freely exposed. The joint was found pretty well filled with blood-clot, which was firmly expressed, and then carefully washed out with a weak solution of carbolic acid (1-60). The ligament was ruptured transversely on a level with the angle of the patella. The torn edges, while in the main transverse, were extremely ragged, owing to the fibrous nature of the structure torn. The joint being thoroughly cleared out, the ragged edges were trimmed to evenness. A fine continuous suture of catgut was used to unite the synovial edges, and a stronger suture of the same material was employed to coapt the edges of the tendon proper. The skin wound was closed by means of salmon-gut sutures, and iodoform and alembroth gauze applied for dressing. The limb was fixed on a box-splint.

Though the patient complained freely of pain, his temperature remained normal, and the dressing was therefore not disturbed for a fortnight, when everything was found to be well. He was dismissed well six weeks after operation.

He returned two months afterwards with perfect use of the limb and obtained permission to resume his work, which he now pursues with the customary activity of the craft.

This is a rare accident compared with fracture of the patella, an injury following the same kind of muscular violence. The statement of the patient as to his knee striking on the landing is correct, no doubt, but the mischief was in all likelihood done at the time he tried to recover his balance. In such recorded cases as I have come across the rupture has been described, with one exception, as occurring at the insertion of the tendon in the tibia—Chiene's and Spence's cases. In Holmes' *System of Surgery*, cases of Toogood's and Shaw's are reported, and only one is described as occurring near the patella. What struck me most forcibly was the ragged stringy nature of the edges of the torn ligament.

2. *Traumatic Aneurysm of the Brachial Artery.*—P. F. came to the Dispensary of the Western Infirmary with a swelling in the bend of his right elbow which had come on immediately after being wounded there by a chip from a rivet. The wound so made bled profusely, but the bleeding was eventually stopped by the dressing and firm bandaging applied by his own medical attendant in the country. The wound healed, but still there remained a fist-sized swelling in front of the elbow, which from its size and situation interfered with the use of the limb, compelling him to apply at the Infirmary for further help. The swelling was not distensile, but under the stethoscope gave a distinct murmur.

Patient was taken into the house on 28th April, 1897, and the swelling was cut down upon, patient being anæsthetised. The clot was turned out, and as no bleeding was noticed, the wound was stitched up, drainage arranged for, and dressing applied; the arm was placed on a rectangular splint.

He returned for dressing three days after, and while the house surgeon was in the act of cleansing the part, a sudden and copious flow of bright blood called my attention to him. At once I applied a tourniquet, not, however, before sufficient blood had been lost to cause him to faint. Patient was carried to bed at once and chloroformed.

The original wound was reopened, clots turned out, and the part thoroughly cleansed with an antiseptic solution. The edges of the wound were freely retracted, and the light being turned on to the part, there was seen at the bottom of the wound-cavity the vessel with an oblique wound of nearly half an inch in its wall. To assure myself that this was the artery I had the tourniquet slackened for a moment, when the flow of arterial blood put the question beyond doubt. I ligatured the vessel above and well below the wound. While engaged in this I felt a rough small body, which on removal was found to be a small spicule of detached bone; but nowhere could I find a trace of the chip of steel that had caused the injury, and therefore I closed the wound and dressed it.

Subsequently, Dr. Mackintosh kindly skiagraphed the injured part, taking two different views, but no sign of the metal was discovered. It must have been carried out by the hæmorrhage at the time of the accident or in the clots removed at operation.

The patient has now regained the full use of his arm.

CASES OF CYSTIC DISEASE OF THE KIDNEY, WITH SPECIAL REFERENCE TO THEIR PATHOLOGY, DIAGNOSIS, AND SURGICAL TREATMENT.

BY DAVID NEWMAN, M.D.,
Surgeon, Glasgow Royal Infirmary.

(*Concluded from* p. 51.)

(*b*) CONGENITAL CYSTIC TRANSFORMATION OF THE KIDNEY.

ALTHOUGH of interest to the morbid anatomist, congenital cystic disease of the kidney is of little importance to the surgeon.

This condition of the kidney has been placed in a subdivision because of the period of its appearance as well as by reason of the very definite distinction in its pathology. I have only met with one instance of this disease, viz., in an infant whom I examined in the Maternity Hospital in 1885.

CASE VI.—In this instance the kidneys were swollen so as almost to equal in bulk the healthy adult kidney. Both organs presented the appearance of advanced cystic degeneration, but the cysts were extremely small, and contained urinary matters, and in this respect differed from the cysts found in adult kidneys. On one side the pelvis was absent, and on the other the ureter was obstructed, so that in both the escape of urine from the kidney was impossible. Both organs were so soft and gelatinous that microscopic examination was extremely difficult.

In small sections which were made the glomeruli in some parts appeared to be healthy, in other parts they were swollen and enclosed in what appeared to be a delicate fibrous capsule. In no part of the sections was there any marked excess of fibrous tissue, but in several areas there was marked compression of the delicate uriniferous tubules by the cysts. The epithelial lining of the uriniferous tubules was swollen and granular, and where tubules were not dilated into cysts they were choked by swollen and granular epithelium.

The cysts were most abundant in the cortex, but were also found in the medulla; in this case it was evident that the cystic transformation of the kidney was due to obstruction of the urinary exit outside the parenchyma of the organ.

According to Virchow, cystic transformation may be due either to retention of the excretion as a consequence of embryonic nephritis causing narrowing of the uriniferous tubules, or to impaction of the straight tubules with deposits of uric acid, both of which ultimately lead to obstruction within the parenchyma of the kidney, and perhaps also to atrophy and obliteration of the pelvis. On the other hand, Köster assumes that the primary lesion is a malformation of the lower urinary tract, and this view is supported by the circumstance that congenital cystic kidney is frequently associated with malformations of other parts. For example, Hausinger observed a case of cystic disease of the right kidney associated with congenital absence of the lower extremity and the female genitals on the same side of the body, while on the opposite side nothing abnormal was found. On the other hand, cases have been recorded in which cystic transformation of the kidney has been observed in the fœtus and not associated with any disease or malformation of other parts of the body. In such instances the presence of the lesion in the kidneys can only be accounted for by adopting Virchow's theory.

In such cases, death and premature expulsion of the fœtus may occur, or abdominal swelling produced by the disease may act as a hindrance to birth, which can only be overcome by operation. In other instances the abdominal swelling has so interfered with the respiration and circulation that death has occurred almost immediately after birth.

(*c*) PARANEPHRIC CYSTS.

A careful distinction must be drawn between paranephric cysts and single cysts which form in the substance of the kidney, as, for example, in Case II. Many writers have failed to make this distinction, so that cysts not always of the same kind have been classed together; for example, large simple peripheral cysts may develop in the substance of the kidney, and by their bulk displace the proper renal tissue, so as to cause a bulging of the capsule, and the cyst may even penetrate as far as the pelvis of the kidney although it fails to communicate with it.

True paranephric cysts are formed external to the capsule of the kidney.

Dickinson describes a preparation from St. George's Hospital Museum in the following terms:—

"A large cyst protruded from the back of the pelvis, which is generally but little dilated, and is scarcely unnatural except that its posterior wall opens into the cyst behind it. The ureter, which was unobstructed, opened into the cyst, so that this cavity lay in the course of the urine, between the pelvis and its duct. The cyst resembled in extent, and somewhat in shape, a distended stomach, and held above four pints of clear albuminous fluid.

"The abdominal tumour was first noticed when the patient, a woman of the age of 37, was brought into the hospital in consequence of having been knocked down in the street. She fell down, became unconscious, and died in a few hours from causes which the *post-mortem* imperfectly explained. She had emphysema and bronchitis."

The case just described occurred in an adult.

Mr. Cæsar Hawkins, in the *Medico-Chirurgical Transactions*, vol. xviii, describes a similar cyst of fœtal origin. The cyst contained five pints of translucent fluid, which on examination was found to be free from all urinary constituents. The cyst lay behind the kidney, and while being closely attached to the organ it showed no evidence of having originated in the kidney substance. There were, however, two small openings into the pelvis which afforded a communication between the cyst and the cavity of the kidney. A prolongation of the cyst passed under Poupart's ligament and through the femoral ring.

CASE VII.—*Large Paranephric Cyst on the Posterior Aspect of an Amyloid Kidney—Cyst not communicating with Renal Pelvis.*

In 1884 I made a *post-mortem* examination in a case of Dr. Wood Smith's, who was admitted to the Royal Infirmary, and died from amyloid disease on 7th July, 1884. The cyst of the kidney had not been suspected during life, but at the inspection a thin-walled cyst the size of a goose's egg was found lying posterior to the left kidney, and completely outside the fibrous capsule. The contents of the cyst were clear, with specific gravity of 1005, and contained about 1½ per cent of albumen, a trace of chloride of sodium, but no organised urinary constituents. From the pressure of the cyst there was slight flattening of the posterior aspect of the kidney. The *post-mortem* examination was limited to the kidneys only, by request. Microscopic examination demonstrated amyloid infiltration of the kidneys. The wall of the cyst was about one-sixtieth of an inch thick, and was composed of fibrous tissue only, and even although a careful examination was made of various parts no indication could be discovered as to the tissue from which the cyst originated.

So few cases of paranephric cyst have been recorded that we can say little as to the diagnosis or symptoms, but probably they closely resemble those found in Case II.

(*d*) CYSTS DUE TO THE PRESENCE OF PARASITES.

The presence of echinococcus in the kidney gives rise to true hydatid of the kidney. Cysts due to the presence of echinococcus of the kidney are, however, rare in this country, almost all the cases and specimens described by the older writers being in reality not hydatids but cystic degeneration of the kidney. For example, in the Hunterian Museum of the University of Glasgow, a number of cases are entered in the catalogue as being hydatid of the kidney, while in reality there is not a single specimen of cysts due to the presence of the parasite, so far as I discovered when I went over the Museum eight years ago. Consequently the statistics on the subject are not very reliable, unless the specimens have been examined with a clear distinction made between hydatids properly so-called, and the form of cystic transformation of the kidney which I have described above.

Hydatid disease differs essentially in its pathology from the lesions which we have been considering up till the present. These cysts of the kidney are rounded in form and fluctuant, and when the parasite is seated in the cortex, or immediately beneath the capsule, the growth may attain considerable dimensions. The echinococcus has a great tendency to rupture into the renal pelvis, the renal tissue in which the cyst is embedded tends to undergo atrophy and degenerate changes, and not infrequently there is an increase in the fibrous tissue of the organ.

The cysts vary in size from extreme minuteness to a magnitude sufficient to hold several pints of fluid. The cysts may occupy one or both kidneys, or they may be limited to one end of the organ only, while the remainder may be healthy. Any part of the kidney may be attacked.

When the parasite develops in the pelvis of the organ the growth may attain such a size as to be palpable during life, and when of very large size it is liable to be mistaken for an ovarian tumour. As a consequence of pressure of the new formation in the pelvis of the organ, the parenchyma of the kidney may become entirely destroyed.

In this country hydatids of the kidney are rarely seen, and they are also uncommon in America; while in Iceland, in some parts of Germany, and in Australia the disease is frequently met with.

Two specimens are to be found, however, in the Museum of the Western Infirmary. One was sent by Dr. J. Lindsay Steven and Dr. Fotheringham; the other was from a patient who died under the care of Dr. Gavin P. Tennent.

Neisser, who collected no less than 986 cases of hydatids in man, states that of all these the kidney was involved in only 80; and Davaine has shown in his elaborate statistics that, in 566 cases of echinococcus in man, the kidney was affected in only 30 instances. The researches of others corroborate the accuracy of these statements. When it is borne in mind that echinococcus may attack any portion of the body, one would expect the kidney to be more frequently involved in the disease. In connection with this point Ebstein remarks:—"The cause of the kidney being relatively less frequently involved is to be found in the fact that the young animals can find their way out of the stomach more rapidly and easily into the liver. Of the reasons why in other cases, however, they wander directly into the kidneys, and at the same time often leave all the other organs free, we are unable even to form a supposition."

Dr. Roberts shows the following results from an investigation of 63 cases in which hydatids were found in the kidney, or passed by the urethra:—In 47 cases the cyst opened into the pelvis of the kidney; in 1 case, into the pelvis of kidney and lungs; in 3 cases, into the pelvis of kidney and intestine; in 1 case, into the pelvis of kidney and stomach; in 1 case, into lungs alone; in 8 cases, did not open at all; in 2 cases, opened artificially. It will be seen from these figures that in 52 out of 63 cases hydatids were discharged by the urethra.

CASE VIII.—*Hydatid Cyst of the Left Kidney.*

The specimen was removed from a patient who had been under the care of the late Dr. Scott Orr (1884) in the Glasgow Royal Infirmary, and who died at his own home. While pathologist to the Infirmary I was asked to make a a *post-mortem* examination of this case. My notes of the clinical history are very imperfect. The patient suffered from symptoms of chronic interstitial nephritis of six months' duration. A tumour also was observed in the left lumbar region, there was some œdema of both lower extremities, and the urine contained a varying quantity of albumen, but the amount was never considerable. On percussion the dulness extended from the costal margins to the crest of the ilium, but no fluctuation was detected.

A fortnight previous to death the patient was suddenly seized with a severe pain in the left lumbar region and along the line of the ureter, and, following relief of this pain, some globular masses were noticed by the patient in the urine. The exact nature of these masses was not ascertained, but probably they were echinococcus cysts.

At the *post-mortem* examination, made on the 13th December, 1884, the left kidney was found to be displaced by a large globular cyst which occupied the upper portion of the organ, the cell contents were pultaceous, and contained a large quantity of fat; the wall of the cyst was soft and irregular, and was continuous with the pelvis of the kidney, but was clearly separated from the renal parenchyma. On section the wall presented the characteristic stratified appearance of hydatid cyst, and on microscopic examination echinococcus heads were found.

The symptoms of renal hydatids are often very obscure. The growth may attain considerable dimensions without its presence being evinced either by pain or febrile symptoms.

This is so when the cyst does not communicate with the pelvis of the kidney. In such cases there is no interference with the elimination of the renal excretion. In many, however, the cyst ruptures into the pelvis, when obstruction to the flow of urine and pain are early symptoms. Beyond the presence of the cyst contents the urine is generally normal, unless the disease is complicated by pyelitis or some organic disease of the organ. When rupture of the cyst occurs, the fact is evinced by the presence of fragments of the cyst in the urine, and occasionally by the existence of pyuria or the presence of renal colic.

The physical signs are those of renal tumour, but while this is so, as a rule hydatid cysts vary more than other tumours in their position with reference to the colon.

This is probably explained by the circumstance that cysts, during their early stage, only involve a small portion of the organ, and in their development extend outwards, dissect the peritoneum from the abdominal wall, and press the colon towards the middle line. They seldom rupture into the peritoneal cavity. Their contents may, however, escape into the respiratory passages through the diaphragm or into the pleura, they may also open into any of the hollow abdominal viscera, or by suppuration the contents of the cyst may be discharged externally.

The diagnosis is in some cases extremely simple, in others almost impossible. When marked renal colic occurs, followed by the discovery of echinococcus vesicles in the urine, the diagnosis is almost certain; and if the indications just mentioned be accompanied by the physical signs of renal tumour, and simultaneously with, or following the attack of renal colic, there is a sudden diminution in the bulk of the swelling in the loin, the diagnosis is absolutely certain. In doubtful cases, where the cyst has not ruptured into the renal pelvis, and the urine does not give evidence of the character of the lesion, the fact that it is renal may be demonstrated by puncturing the cyst and withdrawing a portion of its contents. This procedure has a double advantage; not only does it clear up the diagnosis, but it is also a useful means of treatment. The fluid so procured has a specific gravity of about 1009 to 1014, its reaction is neutral, it is clear, colourless, transparent, and does not, as a rule, contain albumen. But while this is generally the case, the presence of albumen does not prove the fluid to be not hydatid, as in some instances the contents of a hydatid cyst are albuminous. This is especially apt to be so if the cyst has been previously opened.

The fluid usually contains a quantity of chloride of sodium, and may have suspended in it cholesterine crystals, uric acid, triple phosphates, oxalate of lime, or hæmatoidin crystals. For the purpose of examination the urine should be placed in a conical glass, and set aside for some hours, to allow any hooklets that may be present to deposit. The presence of these bodies is pathognomonic of hydatid disease, but it requires other evidence before we are entitled to conclude positively that they are of renal origin. This is so even when they escape by the urethra, for in a few instances echinococcus cysts have been known to rupture into the bladder and other portions of the urinary tract when the disease does not involve the kidney. In such cases the nephritic colic, which usually accompanies renal hydatids, is absent.

The diagnostic significance of so-called hydatid fremitus, when it can be obtained, is great, and it may be elicited when the tumour is tense. The cyst should be compressed by the second finger of the left hand, and a slight sharp tap should be given to it with the finger of the right hand. The finger should be allowed to rest for a short time, when a peculiar vibratory thrill will be communicated to the left hand. This is hydatid fremitus. When felt it is of great value, but its absence is of no significance. Its duration is uncertain, sometimes brief, but frequently prolonged.

When the cyst ruptures into the renal pelvis the course of the disease is generally favourable. Notwithstanding, however, cases have been recorded where the patient has continued to pass vesicles at longer and shorter intervals for twenty or even thirty years. Davaine mentions a case of a woman who suffered from attacks of renal colic, accompanied by the escape of cysts by the urethra during a period of twenty years. Death may ensue from rupture of the cyst into some important viscus, or by a solitary kidney becoming the seat of the disease. When the tumour is small in size, and located close to the pelvis, the prognosis is favourable. This is especially so if the kidney be the only organ involved. When the tumour attains considerable size, or when it shows a tendency to suppurate, the prognosis is less favourable. If, however, the pus is permitted to escape freely, danger to life is proportionately diminished.

Treatment.—We now come to consider the general question of treatment of cystic diseases of the kidney. Single cysts of the kidney seldom require treatment at the hand of the surgeon; it is only when they attain such dimensions as to cause pressure symptoms, as, for example, in Case II, that one is justified in resorting to an operation. In the case referred to, considerable doubt was entertained as to the diagnosis between a simple cyst and a hydronephrosis, but by cutting down on the kidney the diagnosis was cleared up, and the malady cured. Such cases are, however, rare.

The treatment of general cystic degeneration of the kidney generally falls to the physician rather than to the surgeon, whose aid is seldom asked in such cases when the diagnosis has been correctly made; but, as I already pointed out, now that more attention is being directed to surgical diseases of the kidney, it is well that such maladies as general cystic degeneration should be taken into account in forming a diagnosis, otherwise serious errors may be made.

Upon many patients affected with this disease nephrectomy or nephrotomy has been performed under a mistaken idea of the nature of the case. The earlier operators mistook cystic degeneration of the kidney for ovarian disease. As cystic degeneration is usually bilateral and associated with chronic interstitial nephritis, it is not a disease calling for nephrectomy, nor, seeing that the cysts are multilocular and widely distributed throughout the organ, is the patient likely to be benefited by tapping or nephrotomy. In cystic degeneration surgical interference is contraindicated.

It is only in cases where the cystic kidney is moderately small in size and where symptoms of interstitial nephritis are absent that nephrorrhaphy may be resorted to, to fix a movable organ when it is the cause of marked disturbance. In Case III the displaced cystic kidney was so freely movable that occasionally the displacement gave rise to a transitory hydronephrosis, and on this account an operation was resorted to, but I may safely say that in the large majority of cases of cystic degeneration of the kidney operative interference is to be condemned.

Concerning hydatid disease of the kidney I shall only allude to treatment as applying to the cyst so as to aid its evacuation. No internal medicaments appear to influence the life history of the parasite or the bursting of the cyst, but after rupture has taken place it may be of advantage to facilitate the evacuation of the cyst by washing out the parasites. This is best done by ordering the patient large quantities of fluids, so as to induce diuresis. With a similiar object in view gentle friction in the course of the ureter, applied either by the patient himself or by an attendant, may palliate the pain of renal colic, and at the same time facilitate the progress of the cysts from above downwards, and, during the attack, if the pains be very severe, warm baths, hot fomentations, the subcutaneous injection of morphia, or the exhibition of other preparations of opium may be found useful.

Not unfrequently the ureters become dilated, and thereby the progress of the parasite is facilitated, so that such considerable masses may escape into the bladder that difficulty may be experienced in the passage of the cysts into or along the urethra. If they cause interference with micturition, then means must be adopted to remove them.

Should cysts become impacted in the ureter, or considerable pain and inconvenience be suffered, or if the cyst increase in bulk so as to cause danger to life, without its contents escaping per urethram, the question of operative interference may be raised. Various methods have been proposed; the simplest, and probably the most efficacious, is to cut down upon the cyst, evacuate its contents, and stitch the edges of the cyst to the parietes. This operation has been performed frequently and with satisfactory results. Thiriar, Imlach, and Péan have recorded recoveries after nephrotomy, but in a nephrectomy, by Spiegelberg, the patient died from collapse.

Because of the success of puncture of hydatids of the liver, the same treatment has been proposed for hydatids of the kidney, and it is true that in some favourable cases a surgical operation of this kind has been followed by a diminution in the size of the cyst.

NOTES ON THE ROUTINE EXAMINATION OF THE NORMAL AND THE STRICTURED URETHRA, WITH DETAILS OF THE TREATMENT OF "DILATABLE" STRICTURE: BASED ON THE PRACTICE AT PROF. GUYON'S CLINIQUE, NECKER HOSPITAL, PARIS.

BY A. A. WARDEN, M.A., M.B., C.M.,

Hertford British Hospital, Paris; late Demonstrator of Anatomy, University of Glasgow; and Resident, Glasgow Western Infirmary and Glasgow Maternity Hospital.

THIS paper merely embodies Professor Guyon's clinical teaching as I have had the privilege of following it at Necker Hospital, morning by morning, during the past winter. It is also, more or less, a reproduction of some of the lucid remarks of that great surgeon on "Cathétérisme" in the third and last volume of his *Leçons Cliniques sur les Maladies des Voies Urinaires.*

Having thus disclaimed originality, I may the more boldly insist upon the interest and importance, and at the same time the simplicity, of the subject here dealt with. It describes a method which, though by no means unknown, is not so extensively practised or so carefully elaborated in Scotland as it should be. Use is certainly made of gum-elastic bougies of various sizes and shapes, and of Lister's conical-pointed metal bougies, in the treatment of stricture, but the *bougie-à-boule* or *bougie exploratrice olivaire* is rarely used in the way described, and the filiform bougie[1]—simple or conductor—is in the hands of few.

I trust later to publish further descriptions of some of the work so admirably carried on at Necker—such as the treatment of acute and chronic gonorrhœa, the local treatment of tubercular and other forms of cystitis, the results of internal urethrotomy with Maisonneuve's urethrotome, &c. The equipment of the clinique, the wards, and the consulting department is so admirable—as, indeed, is witnessed by the numbers of foreign doctors present, among whom, curiously enough, Englishmen are prominently absent—that I have thought it might prove useful to those who have not the opportunity of paying a personal visit to the clinique in Paris to publish a few details of its organisation and some elements of the work that may there be seen and done. In so doing I need hardly say that I have the cordial approbation of Professor Guyon, to whom, as to Dr. Chevalier, his able *chef-de-clinique*, I cannot too strongly express my indebtedness and respectful regard.

The rule in urinary, as in all, surgery is that the diagnosis must precede the treatment, and the foundation of our diagnosis must be the intimacy of our acquaintance with the urethra to be dealt with.

This rule, elementary though it be, is frequently broken in the practice of catheterism.[2] How often, for instance, when faced with a case of acute retention does the practitioner hasten to pass, or to attempt to pass, an instrument, often metallic, in practically absolute ignorance of the nature and cause of the retention? If for no other reason than to be able to choose the appropriate instrument with judgment and not at haphazard, we must know the urethra, we must feel our way clear.

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[1] I might add here that this is *the* instrument *par excellence* with which to relieve a patient suffering from acute retention of urine when stricture is present.

[2] "Catheterism" is throughout used in the more general French sense of the passage of *any* instrument along the urethra into the bladder (Guyon, *Leçons Cliniques sur les Maladies des Voies Urinaires*, vol. iii, p. 71).

The object of exploratory catheterism is to appreciate the normal condition of the canal, or if abnormal, to diagnose the lesions present, and while that examination must be minute, no attempt will be made to exhaustively describe all the means that have from time to time been devised, but rather only to refer to the results of Professor Guyon's experience and the method that he now follows.

I. EXPLORATION OF THE NORMAL URETHRA.

The instrument with which we must commence our exploraation of the urethra is the olivary bougie (*bougie exploratrice olivaire*), a set of which should be in the hands of every surgeon.[1] The important points in its construction are as follows:—

1. The stem should be of considerably less diameter than the olive tip. Such instruments, therefore, cannot be made smaller than the No. 6.[2] The freedom and suppleness of the stem in the urethra permit the olive tip to transmit to the fingers a delicate appreciation, point by point, of the conditions in the canal.

2. They should be closed at either end by an olive tip of similar size but of slightly different shape.

3. The "boule," if not literally olive-shaped, should be ovoid, and considerably larger at its base or heel than at the tip.

Begin with a large instrument—No. 18 to 22. If the patient objects, as is not unlikely, that "it will never pass," you may reassure him that it is merely for purposes of examination, and that you have no intention of reaching his bladder.

As the instrument passes in, note each one of your sensations and each one of your patient's. If the urethra be normal you will be conscious of an easy progression until you reach the membranous portion, the commencement of the posterior urethra,[3] while your patient will confess only to a slight sense of burning. No less normal, however, is the sensation of resistance and of greater tenderness as you reach the posterior urethra. Of this passing sensation you will do well to apprise your patient.

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[1] One of the best makers of these and all gum-elastic instruments, which cost about a shilling each, is H. Vergne, Rue St. Honoré, Paris.

[2] This refers to the scale Charrière in thirds of a millimetre, and this No. 6 corresponds to the English No. 3.

[3] Professor Guyon divides the urethra into "anterior" and "posterior" portions, the anterior or prepubic comprising the navicular, penile, scrotal, and perineo-bulbar; the posterior or retropubic, comprising the membranous and prostatic portions (*loc. cit.*, vol. ii, p. 295).

As a rule, you will easily overcome this physiological obstacle with your large instrument, which, being straight and supple, follows the inferior urethral wall and directly and squarely, or rather roundly, enters the membranous portion, which you keep tense by gently drawing upon the penis. The patient is as fully conscious as you of the resistance overcome, and not infrequently congratulates you and himself upon the fact.

As you pass through the prostate—the only remaining part—and enter the bladder, there is a complete absence of sensation and of resistance.

The exploration is completed by the withdrawal of the instrument as slowly and as carefully as it was introduced, and the extent, amount, and nature of the resistance offered by the sphincter is again appreciated. This, indeed, is the only obstacle encountered in the urethra under normal conditions, but it is invariably encountered and at the same spot in all patients.

External palpation will tell you exactly where the olive of your bougie is—*i.e.*, in what portion of the urethra, which you must measure by regions and not by inches. The membranous portion you will find deeply situated in the perineo-bulbar area just in front of the anus. Once the instrument has entered the membranous portion you may follow it, not by palpation through the perineum, but by your finger in the rectum.

II. EXPLORATION OF THE URETHRA IN CASE OF STRICTURE.

In such a case you will learn not only the amount of diminution of calibre of the urethra, but also the site, the number, and the nature of the strictures.

As your diagnosis must rest upon your knowledge of the patient, begin by questioning him, and you have but three questions to ask:—

1. Have you had gonorrhœa; how often and when?
2. Have you ever received a blow or fallen in such a way as possibly to injure these parts, and was such an injury followed by an immediate flow of blood from the urethra?
3. Have you ever, after sexual intercourse, passed blood by the urethra?

You will never see a stricture without a cause. They *must* be gonorrhœal, traumatic, or cicatricial. You have only to look to see if he has a chancrous stricture near the meatus, and the existence of strictures of congenital origin or due to masturbation has yet to be proved. Tuberculosis of the anterior urethra is extremely rare. Cicatricial and traumatic strictures are single, and are situated near the meatus in the penile portion or in the bulbo-perineal region. The membranous portion can only be involved if a fracture of the pelvis has implicated the ascending ramus of the pubes.

Gonorrhœal strictures are multiple in the immense majority of cases, and become, speaking generally, narrower as you pass from the meatus to the bulb.

To all these points exploration will call your attention, and again your instrument of choice is the soft olivary bougie.

Again, too, you should begin with a large bougie—20 or 21. If the stricture be gonorrhœal—as most cases are—your bougie will almost certainly be arrested in the penile region, and will very rarely get through the perineal part. The larger the olive, the sooner, of course, will its passage be obstructed. If the stricture be traumatic your instrument will pass up to the site of the original lesion.

In either case note the point of arrest anatomically—*i.e.*, whether it is in the beginning, middle, or end of the fossa navicularis, in the penile, scrotal, or perineal portion. At the same time, you will appreciate the resistance, the extent, and other details in the stricture or strictures present, for chronic urethritis almost invariably leaves disseminated lesions.

A second explorer, several sizes smaller, succeeds the first, and may be arrested deeper in the urethra. Indeed, in many gonorrhœal cases you will only get through the scrotal part of the urethra with olivary bougies of the smallest size. Not to multiply the number of instruments introduced, descend the scale rapidly through Nos. 12 and 8 to 6, when you must have recourse to fine filiform bougies. A very tight penile stricture is usually the result of that violent form of gonorrhœa known as chordee, and these, as a rule, are the densest and the most resistant to treatment.

In this way, then, you make your anatomical diagnosis, and as the etiology is already established, your surgical diagnosis is complete, founded as it is upon a thorough interrogation and a methodical examination.

You will sometimes find, for example, a series of strictures in the perineo-bulbar region that catch your instrument as you withdraw it almost as in a grasp—strictures that are "cylindrical" rather than "annular." Without being very tight, their *extent* lessens the elasticity of the canal, and gives rise to considerable embarrassment of micturition. Notice this catching, grasping, rasping sensation, so characteristic of stricture, and never met with, for example, in urethral spasm.

Replace now your explorer by a conical olivary bougie (*bougie conique et olivaire*), which alone will enable you to gauge the distensibility of the stricture and the resistance the urethra *generally* offers to dilatation.

(*a*) *Difficulties due to Urethral Spasm.*—A condition that may present itself in practically normal urethras, and that yet may simulate stricture—viz., spasm—must detain us a moment.

Its etiology and treatment we need not discuss, but its recognition is all-important. It is, of course, muscular in nature, and must, therefore, be situated in the posterior urethra—namely, in the membranous portion. It is an exaggeration of the normal physiological spasm, that resistance to which each of us owes his ability to retain his urine even in the face of a full bladder. The contraction is primarily reflex, and becomes voluntary. Even a patient, therefore, however skilled in the use of a catheter, is well aware of the difficulty, if not impossibility, of relief if he attempts to pass the instrument at a moment when his desire to micturate is intense. Even under chloroform the resistance of the sphincter remains long unrelaxed, and we must rely for a diagnosis upon a direct examination without either local or general anæsthesia.

By interrogation exclude gonorrhœal, cicatricial, and traumatic stricture—*i.e.*, the possible presence of a permanent organic obstacle in the urethra. Then proceed with your large olivary-tipped bougie, and you will probably reach the commencement of the posterior urethra—the membranous portion. Pressure upon this obstacle determines a certain amount of pain.

All these circumstances—a blank past history, an unimpeachable anterior urethra, complete resistance to even the smallest bougies—all are grounds for a presumptive diagnosis. To settle the question you must have recourse to solid metal bougies. Present one of fair calibre (36, 40, or 44, *vide infru*) to the opening of the posterior urethra, and wait—use no pressure, *wait*—and soon it will pass, and may be withdrawn with the greatest of ease. Not altogether without pain, for the posterior urethra is unusually sensitive during these spasms; but the instrument is never grasped during its exit as in a stricture. Another proof is to introduce with patience a small bougie conductor with a good sized Beniqué screwed on, and you will be surprised at the ease with which the latter enters.

The diagnosis becomes more difficult if both spasm and stricture be present in the same subject. It is altogether doubtful whether spasm may be altogether determined by a stricture of the urethra, the altered functional condition of the bladder being most frequently the exciting cause. Again, however, your mode of exploration is with the *bougie-à-boule*, and, no matter how small its calibre, you will by its means appreciate the rough grasping feeling of the stricture both on the entry and the exit of the *boule*. The spasm may to a certain extent hold your instrument, but not with this peculiar, dry, fibrous grip so characteristic of a stricture. Spasm may become a complication of stricture, but Professor Guyon has never seen a case in which the relation of cause and effect could be proved, and the importance usually ascribed to the rôle of stricture in the causation of spasm is, in his opinion, very unjustifiable.[1]

(*b*) *Difficulties when a False Passage has been made.*—A word may be added as to the exploration and conduct suitable in cases in which a false passage has been made. In the first place, it is to be noted that all the "surgical lesions" of the urethra in the pathological collection at Necker Hospital are situated on the inferior surface of the canal, and involve the *cul-de-sac* of the bulb and the prostatic region. The superior surface, then, must be used as guide. Do not be so ill-advised as to choose fine bougie-conductors. These would almost certainly find their way into the false passage. They look innocent, but you cannot be sure of following the superior surface of the urethra with them, and therefore you are not justified in using them. The instrument with which you are most likely to succeed, and which should be given a fair trial, is a soft gum-elastic instrument of the form known as *béquille* or *coudé*, mounted on curved or *coudé'd* stilettes. Such mounted gum-elastic instruments are greatly superior to metallic ones, and are more likely safely to reach the bladder in cases of false passage. Do not hesitate, however, after a patient trial of appropriate instrumentation, to have recourse, if there is urgent need of evacuation, to suprapubic puncture.

Our object now, however, is to deal with the therapeutic and modifying effect of instrumentation upon the urethral wall, both in normal circumstances and in stricture, and especially that form of modifying instrumentation—dilatation.

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[1] *Loc. cit.*, p. 129.

III. EFFECT OF CATHETERISM.

(*a*) *On the Normal Urethra.*—The intimate contact of an instrument has a very remarkable effect all along the urethral wall. If you have ever, in an experimental spirit of research, introduced a sound or a bougie into your own urethra, you will have been conscious at once of a burning sensation, which gradually lessens into a sense merely of heat, lasting for several hours. Your first micturition is a little hot and painful; those that succeed cannot be called so.

Such experience in healthy urethras taught Civiale to prepare the way for the operation of lithotrity in the days before chloroform, and gum instruments were always passed for some days previous to the operation with such good results that, though prior to the knowledge of the principles of asepsis and antisepsis, this was one of the recognised means of avoiding urinary fever. In this way the urethra is gradually habituated to the contact of instruments, and the vascularity of the urethral wall is not so suddenly altered as greatly to increase the sensibility of the canal.

(*b*) *On the Srictured Urethra.*—The therapeutic value of catheterism in the strictured urethra affords as remarkable phenomena. The physiological changes excited by the contact of instruments extend through the whole thickness of the urethral wall, modifying undoubtedly the properties and even the structure of all the new-formed pathological tissue. It is difficult to see how these changes take place unless it be through the alteration of the nutrition of the tissues by a more abundant vascularisation. If we have nothing but clinical evidence to rely upon, it is at anyrate abundant and positive and practical. It is at least certain that it is the purely physical effect of the *contact of the instrument* that gradually softens and renders supple the pathological tissue of the stricture. Upon the recognition of this fact is based the treatment of stricture known by the name of "dilatation." The importance, interest, and practical value of this form of "modifying catheterism" is too well known to need insistance.

IV. THE PRINCIPLES OF URETHRAL DILATATION.

The value of dilatation, as a method of treatment, lies in this modifying action, the physiology of which we must glance at, for it is nothing less than the *raison d'être* of the method. The results of dilatation depend solely upon the effect of the contact of the instrument on the urethral wall, and are independent of any force or pressure that may, unwisely, be employed, for the action of this method is not a mechanical but a dynamic one. The instrument must pass the stricture with ease, and must not be rammed home or in any way force the walls of the stricture apart. It cannot be too often repeated that *it is the contact which sets in play the organic processes necessary to the transformation of the pathological tissue.*

This has been known as a clinical fact for many years. Desault, Chopart, Dupuytren, all knew that a stricture could be modified even when no instrument had been passed through it.[1] For even "*cathétérisme appuyé*" or the mere application of an instrument against the stricture will modify the tissues throughout their extent, and make a hitherto impermeable stricture easily traversible by a filiform bougie, a method of dilatation that Dupuytren termed "vital" as compared with the "mechanical" effect of the complete passage of a sound or bougie. That its action, however, is *not* mechanical is proved by the following familiar fact:—Almost daily in the wards may be seen patients with hard, tight, difficult strictures through which a small bougie has been passed and tied in for two, three, or four days. At the end of that time the bougie, which was so small as to have been introduced with ease, is withdrawn, and a sensible increase in the diameter of the strictured urethra is noticed—an increase quite out of proportion to the size of the dilating agent. Even before the bougie is removed you will be able to note the freer play it enjoys, the easier passage of urine between it and the wall of the canal, and the patient himself, within forty-eight hours, will express his satisfaction and relief. The introduction of larger bougies will prove that you have gained 1 or 2 millimetres at least, sometimes very much more. This happy result, however, must not deceive you into the belief that a complete cure is at hand, for it is as transitory as it has been rapidly attained. But its significance is plain, that the changes are due to the contact—prolonged, if you like—but to the contact alone without any pressure whatsoever. And from this method—strange as it may appear to reason, familiar, however, to clinical observation—you will obtain the best results and the most rapid dilatation.

If a large instrument be used that has with difficulty and some pressure been passed through the stricture—a method recommended by John Hunter—you incur the risk of urethral ulcerations, of abscesses, and of urinary infiltration and death. Never use an instrument, no matter what your object, which exercises a prolonged pressure upon the walls of the urethra. Nor is strong temporary pressure advisable, and the urethra is always more resistant and more intolerant of instrumentation following such a procedure. It may be followed by retention or, if the urethra be torn, the gravest consequences. Your operation, in a word, will not have been a dilatation but a clumsily lacerated internal urethrotomy.

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[1] An analogous proof that strictures are not cured by mechanical dilatation, but by absorption, lies in the fact remarked upon to me by Dr. P. J. Freyer, of London, that if you have an "impermeable" stricture in front of a urinary fistula, you have only to give free vent to the urine by an external urethrotomy and the stricture becomes, apparently *de ipso facto*, easily dilatable.

Moderate and repeated pressure, on the contrary, undoubtedly dilates strictures by modifying the tissues that enter into their formation. We may doubt the permanence of the goodness of the result, but we cannot deny the facts of clinical evidence; and it is interesting to note to what extent clinical research can explain the action of this repeated moderate pressure. The constant and inevitable effect of the passage of a bougie in a strictured urethra is "a local reaction, more or less lasting, more or less serious, which passes off, and either gives place to an increase in size of the canal or ends in a difficulty or even complete temporary inability to pass water." Only after these first effects does the real enlargement and dilatation begin.

This chain of events may be observed all through the course of treatment, and is the more pronounced the greater the pressure exerted.

The therapeutic rule, therefore, so to speak, to be applied to intra-urethral pressure is that the doses must not be too large nor must they be too frequently administered, *i.e.*, instruments must not be introduced with too much force, too many at a time, or too frequently.

As carefully find out all that happens to your patient between the *séances* of treatment as you note the details of your own examination, and you will be struck with the relatively greater effect of "small doses," *i. e.*, of gentle pressure, of sittings that do not last long and are only upon alternate days. Your conclusion, then, will be, what it has been the object of this paper to show, that "the mere passage of bougies without friction and for but a short period suffices to obtain the regular dilatation of most strictures." Be sure only that at the beginning of each sitting you commence with a smaller size than that last passed. For this race is never to the swift, and the deliberate tortoise is certain to overtake the impatient hare.

V. THE INSTRUMENTS NECESSARY.

The conical olivary bougies, divided according to thirds of a millimeter in Charrière's scale, are the instruments you will use. Metallic bougies (Beniqué's) are scaled in sixths of a millimetre, and even for supple instruments a third is rather a jump, and you will therefore often act wisely in choosing the bougies which pass more or less easily through the same diameter. The olive-tip should be well formed, and must never be pointed. No matter how fine the bougie, its termination should be blunt and a little enlarged. At no stage of the treatment must we profit by the relative thinness of the conical extremity of our instrument to push the thicker part through; especially in difficult strictures must this rule be followed. Surprise the passage rather than force it. Advance and retire repeatedly, turning the bougie between your fingers until the absence of resistance at its tip tells you that you are on the right road. When the smallest bougies are necessary, try various forms, and most useful, perhaps, you will find those known as "bayonet," the form of which enables the point to leave the inferior wall and search all round the circumference of the urethra for the passage.

Metallic instruments are often suitable. The fine graduation of Beniqué's in sixths of a millimetre makes them eminently suitable for this method of dilatation. These Beniqué's may be fitted with a thread, to screw on to the conducting bougie, devised by Maisonneuve, and may be introduced gently and safely, and thus, without breaking the rules we have formulated, you obtain the same dilatation a little more rapidly than soft instruments could have effected. The curve that Beniqué gave to the instruments that bear his name, and their regularly cylindrical, rather than conical, form, make them the most suitable instruments for your purpose. Only if the stricture be penile, and at the same time unusually hard, thick, and extensive, need you prefer the straight metallic bougies of some 4 inches to 6 inches long.

CONCLUSIONS.

The less force we use the more certain are our results in the dilatation of stricture. Let your general rule be to pass two soft bougies, differing by one-third of a millimetre, or two to four metallic bougies, differing by one-sixth of a millimetre, at a time; to leave them in but a minute or two, or even to withdraw them at once; to pass them not oftener than upon alternate days, and always to commence with a lower number. Thus, and thus only, will you successfully treat a dilatable stricture, that is to say, the great majority of strictures. If you have in hand a "bad" stricture, try "prolonged dilatation," but only with soft bougies that enter easily—with, indeed, a bougie that seems to your reason "too small." It is not, however, to reason that we must appeal for guidance, but to the formal dictation of clinical experience, and clinical experience shows us that it is the dynamical, not the mechanical, use of dilating instruments that will give us lastingly good results, without inconvenience, and without danger to our patients. How the simple contact of instruments thus affects the whole tissue of the stricture is made more clear by the study of the pathology of inflammation and the knowledge of the effect of irritation in the transformation of living tissue. It would be absurd, of course, to suppose that we dispense entirely with the mechanical action; the mere fact that we make use of instruments proves it. But no mechanical force is used, because we know such would be useless and dangerous, and would determine pathological changes rather than what we might call the physiological action desired.

If all the resources of this method be fairly tried without achieving sufficient dilatation, you have but one resource—internal urethrotomy in one form or another.

Many cases might be given in detail illustrative of this treatment of stricture. Of such as I have successfully so treated this winter I shall cite but one or two, preferring to refer to the records of cases of older standing which from time to time present themselves for re-examination. This I am enabled to do through the kindness of Professor Guyon and the courtesy of his *chef-de-clinique*, Dr. Chevalier, who have given me free access to the clinical records of cases.

CASE I.—M. (18th January, 1897) comes to consultation on account of difficulty of micturition, a persistent *goutte*, and muddy and purulent urine.

Previous History.—First gonorrhœa twenty years ago; second gonorrhœa ten months ago, the discharge of which has not yet entirely ceased. During last ten years his stream has become very thin.

1st January, 1897.—Had an attack of acute retention.

Present Condition.—Examination (18th January, 1897) finds several strictures through which a soft olivary bougie, No. 7, is passed with some difficulty.

Jan. 20.	Conical olivary bougie,	No. 8.	Feb. 7.	Beniqué (passed upon conductor),	No. 34.
„ 23.	Beniqué,	„ 30.[1]	„ 15.	Beniqué,	„ 38.
„ 25.	„	„ 33.	„ 17.	„	„ 40.
„ 27.	„	„ 33.	„ 24.	„	„ 39.

CASE II.—S., 44, filiform gonorrhœal stricture.

History.—Had gonorrhœa twenty-five years ago. Since then has had some difficulty and frequency in micturition. Fifteen days ago contracted a chill, and suffered considerable difficulty and pain in passing water.

1896.			1896.		
Nov. 19.	Several filiform bougies passed.		Dec. 8.	Beniqué,	No. 37.
„ 24.	Conical olivary bougie,	No. 7.	„ 10.	„	„ 38.
„ 26.	„	„ 11.	„ 12.	„	„ 42.
„ 28.	„	„ 13.	„ 15.	„	„ 45.
Dec. 1.	Beniqué,	„ 28.	„ 17.	„	„ 47.
„ 3.	„	„ 31.	„ 22.	„	„ 50.
„ 5.	„	„ 33.	„ 24.	„	„ 54.
			„ 30.	„	„ 57.

Patient is told to return for dilatation once a month.

Feb. 2, 1897. Beniqués, Nos. 50 to 55. Told to come every two months.

March 31, 1897. Beniqué, No. 57.

This case, like No. I, is too recent to be adduced as a proof of the durability of the result; but at anyrate it proves the temporary and even rapid success of the method, passing from filiform bougies on 19th November, 1896, to almost the largest Beniqué in use (No. 57) on 30th December, less than six weeks later.

CASE III.—B., 32, packer, comes to consultation on 3rd March, 1896.

History.—Gonorrhœa two years ago. No cystitis but slight hæmaturia followed the use of strong injections.

Present Condition.—Micturition painful throughout and at end of act; frequent, every hour during day, but does not rise during night; not imperious. Some complaint of lumbar pains. Urethra—stricture of the scrotal portion, permitting passage of bougie No. 10.

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[1] The smallest Beniqué is No. 24, and, being graduated in a scale of sixths of a millimetre, corresponds to No. 12 of the soft or gum-elastic bougies, which are scaled in thirds of a millimetre.

1896.			1896.		
Mar. 5.	Bougies,	Nos. 10, 11.	Apr. 1.	Beniqués,	Nos. 48, 49.
„ 10.	„	„ 12, 13.	„ 3.	„	„ 49, 50.
„ 11.	„	„ 13, 14.	„ 7.	„	„ 50, 51.
„ 12.	„	„ 14, 15.	„ 10.	„	„ 51, 52.
„ 13.	„	„ 16, 17.	„ 13.	„	Nos. 53, 54, 55.
„ 14.	„	„ 18, 19.	„ 21.	„	Nos. 54, 55.
„ 16.	„	No. 20.	„ 28.	„	„ 55, 56.
„ 18.	„	„ 20, 21.	Aug. 13.	„	„ 54, 55.
„ 20.	Beniqués,	„ 38, 39.	„ 20.	„	No. 58.
„ 23.	„	„ 40, 41.	Dec. 21.	„	„ 56.
„ 25.	„	„ 42, 43.	1897.		
„ 27.	„	„ 44, 45.	Feb. 26.	„	„ 56.
„ 30.	„	„ 46, 47.	(With several numbers below.)		

CASE IV.—A., 58, tailor, comes to consultation on 20th October, 1896.

History.—Two attacks of gonorrhœa nearly thirty years ago, which were both well cured. Long since his stream has decreased greatly in force. During last 12 months micturition has been frequent—three or four times at night; imperious; painless; passes little at a time, but without effort.

Present Condition on Examination.—Left epididymis is indurated. Bladder empties incompletely. Urine is infected. Urethra—filiform stricture in perineal portion; no penile band.

Treatment—

1896.			1896.		
Oct. 20.	Bougies,	Nos. 5 to 8.	Nov. 25.	Beniqué,	„ 37.
„ 25.	„	No. 9.	„ 27.	„	„ 42.
Nov. 5.	„	„ 11.	„ 30.	„	„ 44.
„ 7.	„	„ 12.	Dec. 2.	„	„ 47.
„ 10.	„	„ 13.	„ 4.	„	„ 50.
„ 12.	„	„ 14.	„ 11.	„	„ 52.
„ 14.	„	„ 15.	„ 18.	„	„ 53.
„ 16.	„	Nos. 16 to 18.	1897.		
„ 18.	Beniqué,	No. 34.	Jan. 4.	„	„ 55.
„ 20.	„	„ 35.	Mar. 5.	„	„ 50.
„ 23.	Bougie,	No. 18.			

Though latterly only one number of Beniqué is mentioned, it may be assumed that several others smaller in size were also passed at the same time.

CASE V.—P., 41, milkman, multiple gonorrhœal strictures, 12th May, 1894. First gonorrhœa ten years ago. Has had several since, the discharge of the last of which only ceased a year ago.

Two years ago his difficulty in micturition began. The act was painful, causing him to force more and more violently to evacuate his bladder. His jet is feeble and thin, and has gradually become almost filiform. Has had several attacks of retention lasting twenty-four or forty-eight hours. He now urinates drop by drop.

1894.
May 12. Canal only admits a filiform bougie, which is tied in[1] for forty-eight hours with such good result that on
May 14 dilatation proper with bougies No. 8 and 10 is begun.
„ 15. Bougies Nos. 10, 12, and 14.
„ 16. Bougies up to 18 passed, the latter with some difficulty.
„ 17. Patient, who up to this time had been treated as an in-patient, now left hospital. He neglected to return to consultation for further treatment until six months later.
Oct. Bougie No. 12, and later in same month Beniqué No. 27.

1895.		
July 22.	Beniqué,	No. 30.
Nov. 4.	Bougie,	„ 11.
„ 5.	„	„ 12.
„ 7.	„	„ 13.

1896.		
Jan. 13.	Bougie,	No. 15.
„ 15.	Beniqué,	„ 35.
„ 16.	„	„ 41.
„ 29.	„	„ 42.

The number of such cases might be multiplied indefinitely, but I trust the few I have chosen will illustrate the chief principles upon which I have dwelt. In conclusion, I would add but two remarks:—

1. You will frequently, as in Case No. V, find it advisable, if not necessary, at the outset of your treatment to leave a fine bougie tied in for twenty-four or forty-eight hours. The effect of this little manœuvre is often little short of startling, and affords immense relief to the patient.

2. The stricture does not exist through which you will be unable to pass a filiform bougie of one form or another (olivary, spiral, bayonet, &c.), *with time and patience.*[2] You may be dealing with a case of acute retention, complicated by

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[1] The method used for this purpose is by attachment of the instrument to the pubic hair.

[2] To place your patient in the best condition for success make him take a full-length hot bath for ten or fifteen minutes. This is a most valuable adjunct to your treatment.

the presence of a tight stricture. In such an emergency you may have the patience necessary, but you have not the time. The condition of your patient demands instant relief, and you may be obliged to have recourse to suprapubic puncture. But in the treatment of a stricture by dilatation you have a condition in which no immediate relief is required. You have, therefore, time on your side; all you require is patience. You may have to make the attempt daily for a week or more, but in the end success must reward you; and in the meanwhile you have the incalculable relief of knowing that, with filiform bougies, a false passage is impossible.

A SERIES OF CASES OF ECTOPIC PREGNANCY, WITH REMARKS ON DIAGNOSIS AND TREATMENT.[1]

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BETWEEN September, 1896, and February, 1897, I had under my care seven cases of ectopic pregnancy. As the subject is one which has been attracting a considerable amount of attention of late, and as these seven cases exhibit a variety of the phases of the disease, I have thought that a history of them, with some remarks on diagnosis and treatment, might prove of interest and raise some valuable discussion. I have not arranged the series chronologically, but in the following order:—

1. Four cases of tubal pregnancy ending in (*a*) hæmorrhage into the tube without escape into the peritoneal cavity; (*b*) incomplete tubal abortion; and (*c*) tubal rupture; all removed by abdominal section.
2. Two cases of pelvic hæmatocele the result of tubal abortion or rupture, one treated by the expectant method, the other by vaginal incision and drainage.
3. One case of abdominal pregnancy treated by vaginal incision and drainage.

I shall preface my remarks on diagnosis and treatment by reading you a short history of the cases.

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[1] A paper read, and specimens shown, at a meeting of the Glasgow Obstetrical and Gynæcological Society on 28th April, 1897.

CASE I.—*Hæmorrhage into the right Fallopian tube without escape into the peritoneal cavity—Hæmatoma of right ovary—Salpingo-oöphorectomy—Recovery.*

Mrs. W., æt. 39, was sent into the Samaritan Hospital on 13th February of this year by Dr. Macphail, Whifflet, complaining of abdominal pain of four weeks' duration.

Since marriage fourteen years ago she has had two children, both born at full term. The labours were instrumental, but the puerperia normal. The first child, 13 years of age, is alive and healthy, but the other, two years younger, is the subject of "morbus cœruleus." While pregnant with the latter child, Mrs. W. had at the fifth month a profuse uterine hæmorrhage, which lasted a week.

Dating from the latter confinement, there was before admission almost constant pain in the left iliac region, worse at the menstrual periods and on exertion. Menstruation, which formerly had been always regular and lasted five days, was thereafter three-weekly and of seven days' duration. The quantity, also, was more profuse, and there was considerable leucorrhœa. About three years ago she was for five weeks in Prof. Simpson's ward in the Edinburgh Royal Infirmary. No operation was done, but she stated that "her womb was burned."

On the 18th of January last, her menstrual period having been five days overdue, patient was suddenly seized, while sitting quietly at the fire, with severe pains in the lower part of the abdomen, sacral region, and front of thighs. The pains were like those of labour, and were accompanied by sickness and retching, cold sweat, and abdominal swelling. She felt faint, but did not lose consciousness. She was assisted to bed, and the doctor on his arrival gave her a hypodermic injection of morphia. On the 20th, uterine hæmorrhage began, but it was not profuse, lasted only five days, and, up to date of admission, had not recurred. Several lumps were passed. On the 24th, and again, on attempting to rise out of bed, on the 27th, the attack of abdominal pain, retching, and faintness recurred. There was no subsequent recurrence, but patient was so weak that she was unable to get out of bed. From the onset of the first attack micturition was frequent and scanty, and defæcation difficult.

On admission I found the uterus, which was dense, slightly enlarged and only slightly movable, pushed to the left side and somewhat forwards by a boggy, lobulated mass of the size of an orange. This mass occupied the right postero-lateral region of the pelvis, to which it was adherent. It was adherent also to the left posterior surface of the uterus, and was not tender on pressure. Pulsation in the right fornix was more marked than in the left. Examination of the left appendages revealed numerous tender adhesions. On squeezing the mammæ some secretion was obtained, which showed abundant fat globules under the microscope.

On the third day after her admission to the hospital, I carefully removed two portions of endometrium by means of the curette. Every antiseptic precaution was employed, and no violence used. The uterus was not pulled down, but was kept steady by means of a volsella. No anæsthetic was given.

Both of the scrapings showed under the microscope numerous decidual cells.

From 19th till 23rd February there was considerable uterine hæmorrhage, accompanied with severe pain in the sacral and left iliac regions, but no shreds of decidual tissue came away.

On the 27th, the mass in the pelvis having remained the same as on admission, I performed abdominal section. Some difficulty was experienced in breaking down the numerous adhesions, and while doing so the mass collapsed, and a quantity of dark blood escaped into the peritoneal cavity. On bringing it up, it was found to be the distended right tube. Ligatures were applied, and both tube and ovary were removed. The left appendages were then freed from their adhesions, but were not removed.

Patient made a good recovery, and was dismissed on 31st March.

The following note was taken immediately after the operation:—"The uterine end of the tube is, to the extent of 3 cm., occluded, convoluted, and slightly thickened. The part beyond this is distended by a firm round clot (tubal mole) 4 cm. in diameter. The ostium abdominale is closed, but a tiny opening is found in it on close inspection, and on pressing the tube dark blood is found to exude through this opening. The whole of the tube beyond the clot is greatly distended with dark fluid blood. The tube wall is thin, but is not ruptured. The ovary is dark, globular, and fluctuant, and measures 4 cm. in diameter. On opening it, it is found filled with dark fluid blood."

CASE II.—*Incomplete tubal abortion with expulsion of uterine decidua—Appendicitis—Salpingo-oöphorectomy and removal of vermiform appendix—Recovery.*

Mrs. T., æt. 32, has been married for the last five and a half years. Before marriage, though never robust, she always enjoyed fair health, and menstruation was of the usual twenty-eight day type; duration six days; quantity small; free from pain. Two months after marriage she was confined to bed for two days with pain in the left iliac region, for which she was poulticed. From that time onwards she was troubled occasionally with pain in this part, especially for the first two days of each period, and also when tired. So severe was the pain at times, that she was compelled to have recourse to hot applications.

Further enquiry from herself and her husband, who was formerly a non-commissioned officer in the Scots Greys, fails to elicit any history of scalding micturition, purulent discharge, or abortion.

There have been three children born of the marriage, all of them at full term. All the labours were natural, no instruments used. I was her medical attendant at all three. The first child, born on 6th August, 1892, at full term, was small, and died on the twelfth day. It was not at home when it died, because its mother, a few days after its birth, was infected with scarlet fever through the visit of a friend who had on the previous day accompanied a relative on his way to Belvidere Fever Hospital with scarlatina. During the course of this illness, Mrs. T.'s left breast suppurated, but the scarlatina was not of a malignant type. Recovery was tedious. Fourteen months thereafter the second child was born. It was well-developed, and is still alive and healthy. During the later months of her pregnancy she complained of occasional pain in the cæcal region, and a few days after the confinement this pain recurred with such severity that fomentations were applied. The opinion given by me at the time, that it was due to a subacute attack of appendicitis, was verified later on at the time of the operation.

The third child was born on 14th May, 1896, and, like the last, is still alive and healthy. During the pregnancy and puerperium the pain in the cæcal region recurred. From May till the end of the year patient's general health was fairly good, but when tired or chilled she complained of pain in the cæcal region, and also, though to a slighter degree, in the left iliac region.

On the 5th of January of this year I was sent for, and found Mrs. T. suffering from another attack of appendicitis, brought on, according to her statement, by a wetting two days previously. I examined her and found tenderness and a slight swelling at M'Burney's point. Bimanually, I found the uterus somewhat retroverted, the right appendages normal, but the left tube distended at its outer end to the size of a damson. On the following day, though the inflammation was subsiding, I decided to get a consultation. Next day Dr. Hector Cameron saw the patient with me, and gave his opinion that the question of operation should be left over at present.

Early in the morning of the 11th I was suddenly summoned, and found Mrs. T., who had till then been progressing favourably, in a state of semi-collapse, and complaining of pain all over the abdomen, but more especially in the left iliac region. Slight uterine hæmorrhage had begun on the 8th, a few days before menstruation was expected (the date of the last period having been 12th till 18th December), and she thought the pain was due to this, but stated that it was much worse than usual. Examination revealed a considerable degree of tenderness in the left appendages; but subsequently I made out that the swelling which I had discovered previously had become slightly larger, and was doughy in consistence, while pulsation in the left fornix was somewhat increased. I suspected tubal pregnancy, but was assured by both husband and wife that pregnancy was out of the question. The hæmorrhage continued only two days.

On the 20th there was a second attack of the same kind, which rendered my suspicions stronger, and I had resolved to get a scraping of the endometrium in order to search for decidual cells, when first two or three fragments and then a larger portion of decidua were expelled from the uterus. Microscopic examination revealed groups of decidual cells, and on the 26th I got the patient removed to the Sandyford Nursing Home. Next day, assisted by Drs. M'Bryde and Russell, Dr. M'Conville giving chloroform, I made a mesial incision in the abdomen, and, after breaking down a few posterior adhesions, during which a slight quantity of dark blood escaped, I removed the left uterine appendages. Through the same incision, but with some difficulty owing to the close adhesions of the cæcum and ileum to one another and to the anterior abdominal wall, I removed the vermiform appendix, which was found curled up, slightly distended at its extremity, and adherent along its whole length to the cæcum.

On examining the Fallopian tube afterwards I found it distended at its infundibular extremity to the size and shape of a large plum. Section of it revealed that hæmorrhage had occurred into the decidua and also into the amniotic sac; but there was a free space between amnion and chorion. The embryo had been completely disorganised, as nothing but blood-clot was found in the amniotic sac.

The ovary was occupied by two large corpora lutea, one larger than the other.

Mrs. T. made a good recovery, and went home on 27th February. I saw her on Saturday last (24th April); except for debility, which still persists to some extent, she is in good health and is free from pain.

CASE III.—*Pseudo-intraligamentous tubal pregnancy—Incomplete tubal abortion—Salpingo-oöphorectomy—Recovery.*

Mrs. H., æt. 28, on the advice of Dr. Halket, sent for me on 27th January of this year. She complained of uterine hæmorrhage of three weeks' duration, and of recurrent attacks of abdominal pain during the same period.

I obtained the following history:—"Married eight years ago, she has had two children. One, born seven years ago, died of hydrocephalus when four months old; the other, born five and a half years ago, is still alive and healthy. Both labours were natural, no instruments having been used, and the first puerperium was normal. After the second confinement she got on well till, on rising on the tenth day, she was seized with pain in the left iliac region. This soon passed off, but ever since it has recurred during each menstrual period, and also on getting wet, but not on exertion. For four years after this confinement menstruation, which had previously been regular, was delayed on an average about twice a year for about two weeks. On each of these occasions the quantity, at other times moderate, was profuse and accompanied with clots, but these clots were never examined. For fully a year now, however, menstruation has been regular, lasting three days, and quantity normal.

"On 5th January of this year, her period having been four days overdue, uterine hæmorrhage set in, with severe colicky pains in the abdomen, and has continued ever since. For the first week the flow was slight; but on the 12th, with a second attack of acute abdominal pain, it became and has continued more profuse. There have been some small clots, and a few shreds which may have been decidual, but were unfortunately not retained for inspection. The attacks of abdominal pain returned on the 17th and 23rd, and on the evening of my visit, the 26th. Each attack was of the nature of colic, lasted about half an hour, and was felt over the whole abdomen. For the rest of each day there was a feeling of tenderness in the left iliac region. With each attack she felt faint and exhausted, and had to sit or lie down; but between times she went about her usual housework.

"During the last week there has been a bearing-down feeling—a feeling as if something should come away—and the bowels have not moved for three days. Micturition is normal.

"Her family history is bad, as, though her father is alive and well, her mother and four maternal uncles all died of phthisis."

On bimanual examination I found the slightly enlarged uterus pushed to the right side by a soft elastic mass the size of a goose egg. This mass was circumscribed, but not freely movable, and it bulged down the left fornix. Vaginal pulsation over it was marked, much more so than in the right fornix.

Thinking myself justified in diagnosing ectopic pregnancy, possibly intraligamentous, I got Mrs. H. sent on the same day into the Sandyford Nursing Home. On the following day Dr. M'Conville gave chloroform, and with the assistance of Drs. Halket and Russell I performed abdominal section. I found on passing my fingers into the pelvis that the mass was firmly adherent posteriorly, and it was with some difficulty that I managed to free it sufficiently to bring the mass up through the abdominal incision. While separating the adhesions a small quantity of dark fluid blood escaped. I then found that the pregnancy was tubal, not intraligamentous as I had supposed. I ligated the pedicle, and removed both tube and ovary.

On opening the tube, which was unruptured, I found it occupied in its middle third by a tubal mole of the size of a plum. The fact that it was the result of conception was verified later by finding chorionic villi in the mole and a large corpus luteum in the ovary.

Mrs. H. made a good recovery, and returned home in March.

Case IV.—*Double tubal pregnancy, each ending in rupture of tube—Double salpingo-oöphorectomy—Recovery.*

Mrs. B., æt. 33, was seen by me in consultation with Dr. Ritchie on 18th November, 1896. We came to the conclusion that she was suffering from ruptured ectopic pregnancy, and got her admitted into the Samaritan Hospital on the following day.

Twice married—to her first husband she had three children; to her present husband only one, born four years ago. All four children are alive and well. The labours were tedious, but otherwise normal, and the patient always made a good recovery. She had always previously had good health, and had never been troubled with leucorrhœa nor pelvic pain, while menstruation was regular, painless, and of moderate quantity, each period lasting three days. Between March and May of 1896, however, there was amenorrhœa for seven weeks, and as during this time there was morning sickness, and her breasts were full and tender, patient thought that she was pregnant. At the end of the seven weeks, Mrs. B. was suddenly seized with severe pain in the hypogastrium and right iliac region, and with uterine hæmorrhage. There were no rigors nor pyrexia, but patient felt very ill, and the bleeding lasted four or five weeks. For the first fortnight she kept her bed, and then for the rest of the time was up and down. She did not remember having passed any clots nor shreds of membrane.

In the beginning of July, four weeks after the cessation of the hæmorrhage, a normal menstrual period occurred. It lasted three days, quantity small, and was not accompanied with pain. At the beginning of August and of September, periods of the same character occurred; but from 2nd September till 30th October, there was a second period of amenorrhœa, during which she had the same symptoms of pregnancy as before. She was entirely free from pain till, on the 28th of October, about 6 A.M., she was awakened with a desire to defæcate. While on the stool she suddenly fainted. On recovering consciousness she found herself very weak and bathed in sweat, and her abdomen swollen and tender. The tenderness was most marked in the left iliac region. During the day she had seven attacks of syncope, and there was a good deal of retching, but no pyrexia. Two days afterwards, slight uterine hæmorrhage set in and lasted five days. Some small lumps and membranous shreds came away, which she showed to Dr. Ritchie, who examined them and considered them to be clots and decidual tissue. The uterine hæmorrhage recurred on 13th November and lasted till the 17th, but, though the left iliac region continued to be tender, there were no recurrences of severe pain. Micturition was frequent and scanty, but defæcation was normal.

On bimanual examination I found the cervix uteri hard and lacerated bilaterally, and the os patent, but not sufficiently so to admit a finger. The uterus was somewhat enlarged, and was retroposed and slightly dextroposed. The right appendages were apparently normal, but to the left of the uterus, in the upper part of the pelvis, was a soft, oval, but not easily definable mass. This mass was not specially tender nor easily movable. From its posterior surface down into the pouch of Douglas, to the level of the external os, there extended a firm mass of the length and thickness of a man's finger. Pulsation in the left fornix was more distinct than in the right. The sound passed 3½ inches.

On the evening of the day of admission I removed two small portions of endometrium, using the same precautions as in the case of Mrs. W., and found abundance of decidual cells.

On the 22nd I performed double salpingo-oöphorectomy through an abdominal incision. A good many adhesions had to be separated posteriorly on both sides, and the finger-like mass in the pouch of Douglas was removed and found to be firm blood-clot. No other blood-clot nor any fluid blood was found.

On examination of the left tube an oval bulging, 3 cm. by 2½ cm., was found in it at a distance of 2½ cm. from the fimbriated extremity. At the postero-internal part of this distended portion there was a small rupture of the tube wall, at which part a firm, dark-red clot, measuring 4½ by 2½ by 1½ cm., adhered to the posterior surface of the tube. The ostium abdominale was closed, but the rest of the tube appeared to be normal. The broad ligament was thickened, spongy, and vascular, and the ovary, normal in size, contained several unruptured Graafian follicles and a large corpus luteum. On opening the tube no embryo was found, but the distended portion was occupied by a tubal mole, as evidenced by the presence of chorionic villi.

On examination of the right appendages, the portion of the tube removed was found to be 5¾ cm. in length. On the posterior surface, 1½ cm. from its uterine extremity, there was a small rupture of the tube wall to which was adherent a clot, darker, firmer, and much smaller than that attached to the left tube. It measured ¾ cm. in diameter. The tube at this part was distinctly smaller in diameter, and on laying it open the canal was found to be markedly stenosed. On either side the tube seemed normal, except that on the upper surface, at a distance of 1 cm. from the ostium abdominale, there was an accessory ostium, surrounded by fimbriæ fully ½ cm. in length. Both ostia were patent.

The right ovary was normal in size, but to its postero-external surface there was adherent a firm, dark-red clot, measuring 3 by 2 by 1½ cm. On removing this clot, it was found to be protruding from a ruptured cyst, measuring 1½ cm. in diameter.

Patient made a good recovery, and was dismissed on 4th January, 1897. She is at present in good health.

(*To be continued.*)

CLINICAL ESSAYS ON INSANITY.

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V.

ON CERTIFYING LUNATIC PATIENTS AND THE GENERAL PRINCIPLES OF TREATMENT.

MEDICAL men in active practice frequently experience considerable difficulty in certifying patients as being of unsound mind, and requiring detention in an asylum, on account of not having had opportunities of becoming practically acquainted with the different phases of madness. Consequently it is not too much to say that lives are annually lost through timid and faulty diagnosis. Not only are the lives of patients thus lost, but also sometimes those of their friends through the diagnosis of insanity not being completed until some visible disaster has occurred.

As a rule, medical men in general look for some outstanding delusion as their chief guide in framing a diagnosis. Yet, from what has been said in the preceding essays, it may be gathered that that may be difficult to elicit, and sometimes impossible.

To certify that a patient is of unsound mind may be an easy matter in some cases if the signs and symptoms of his madness are conspicuously present—*e.g.*, the patient may be raving mad. Again, it may be most difficult to do so if the patient has lucid intervals in his disease, or if he be a monomaniac with fleeting delusions or with delusions difficult to elicit.

It is necessary not to confine oneself in the investigation to the mere presence or absence of marked delusions. There may be homicidal or suicidal tendencies, or attempts may have been made in these directions. There may be hallucinations of sight and hearing present, but these symptoms are chiefly to be found in acute cases in which the diagnosis is least difficult.

In a general way, it is well to begin by ascertaining if the patient is suffering from any acute form of mental disease. Does the condition point to the malady belonging to the group of diseases associated with maniacal states, or with melancholic states, or with demented states? Then a knowledge of these disordered states of the mind will come to our aid in completing the diagnosis. Monomaniacal and epileptic forms of insanity will occasionally offer difficulties. In epileptic insanity we must search for evidences of violence, defects of speech, confusion of ideas, &c.

Again, there are some forms of insanity where, instead of perversion of the mental faculties, we find defects. If a man in fair bodily health will not work, being defective in mental energy or will power; if he persists in lying in bed all day for weeks or months, and harbours hypochondriacal notions about himself and shows no signs that he feels himself a responsible creature, he is clearly of unsound mind, and may be certified as such and as requiring supervision by others; but the wording of the certificate may be troublesome to an unpractised hand. The facts—that a patient "cannot do" for himself, and is heedless and regardless of himself and his neighbours; or is incompetent mentally to guide himself, being foolish and rambling in speech and silly in conduct; or is unduly irritable, impulsive, and aggressive; or listless, apathetic, and confused in mind; or morbidly suspicious and homicidally inclined; or restless, incoherent in speech, and disorderly or defective in mind, with loss of memory and childish indisposition—are all of great importance in framing a certificate of madness.

It is essential in filling up a certificate of lunacy to attend to the clerical part of it, and state fully and accurately names and addresses and dates, as many mistakes of commission and omission are made, and the sheriff may regard the certificate an invalid one on that score, while, of course, he is not usually able to dispute the facts on which the diagnosis that the patient is of unsound mind rests.

In approaching a patient supposed to be of unsound mind one should exhibit no trace of nervousness, especially if the patient be suffering from maniacal excitement; but, keeping one's wits about him, interview the patient with some degree of boldness and confidence. With morbidly suspicious patients it is best to be frank and courteous, and investigate the mental condition from a variety of standpoints, so that if the patient's mind be lucid on most things, his weak points will be detected—*e.g.*, delusions of a religious, amatory, and financial nature, &c.

Principles of Treatment.—In treating cases of insanity there are certain general principles of treatment that should be kept steadily in mind. If the disease be acute, attended with maniacal excitement, it is obvious that all sources of irritation should be as far as possible removed, in order that the disordered brain may get as much rest as possible. Consequently, in such cases the patient should be kept in a quiet chamber, free from the excitement of noise and social intercourse with his neighbours. Cleanliness, abundance of fresh air and light, with suitable nourishing foods, are all important. Sleep should be secured by as much out-door life as possible, if the patient's strength will permit of his being in the open air. It is well, also, in all cases to remove the patient from the surroundings under which his madness developed. Consequently, asylum treatment is requisite in most cases, especially where expense is an object of concern. The mad ideas which trouble and torment the mind must be dispelled by endeavouring to supplant them by healthy ones.

Discipline which consists in the regular discharge of duties should be a prominent factor in treating cases of madness. Healthy habits are thereby secured, which are in themselves powerful aids in the cure and powerful weapons in prophylaxis. The will power in all cases of insanity is more or less impaired, and stronger wills must guide the weaker ones. Consequently, the strength of character of the physician is of the highest importance, and in proportion as that obtains so will benefits to the sick follow. In dreamy and vacuous states of mind rousing treatment is necessary. An idle brain is bad for the sick as well as the healthy, except in very acute cases of illness. Active manual pursuits are valuable in dispelling soft and listless states of the mind. The emunctories of the body should be kept well open, as retention of waste products in the blood is perhaps the most powerful factor in the production of melancholic and depressed states of the mind. This implies the judicious use of baths, aperients, diuretics, cholagogues, and exercise in the open air. When to soothe and when to stimulate the brain is the crux of most of the mental treatment.

Dietetic treatment is of great consequence. We know that nitrogenous foods are necessary for the repair of tissues, and that the fats and starches and sugars are chiefly heat and force producing foods. Advantage should be taken of this knowledge in administering abundance of nitrogenous foods to repair the wasted and recruit the devitalised forms of many lunatics. In acute diseases we must be content with liquid foods for the most part; but a free use of nitrogenous foods would, I am sure, in a large measure supply the one thing needful in not a few cases of chronic insanity. Even a free allowance of tea, bread, and potatoes will scarcely make any material difference in the weight of many chronic lunatics, while an egg custard daily will often increase their weight perceptibly in one week. And in this connection great credit is due to Clouston, who has been a pioneer in advocating feeding of cases of insanity.

I would advocate a more liberal allowance of cheap nitrogenous foods in our parochial asylums, where expense in this direction seems to be so distasteful to the managing boards. I consider three good nitrogenous meals daily absolutely necessary to get the best results. In my experience, both with lunatic and non-lunatic patients, health and strength and weight are best obtained by increasing the proteids rather than the carbo-hydrates in the diet. The uric acid theories of gout seems to have cramped our notions of the value of nitrogenous foods in treating chronic diseases.

A problem that frequently arises is how to break recurring mad habits. Many patients get well for a time, then relapses take place. It seems to me that, if the diet were properly looked after, as above indicated, a great advantage would be got towards preventing recurrent attacks. Disease and weakness go arm in arm, not disease and strength. Maniacal excitement is an indication of brain weakness, not of brain strength. Then, of course, discipline which fortifies the mind and increases will-power and strengthens inhibitory action is likewise a powerful aid. Further, certain medicines by bracing the system may be of service—*e.g.*, arsenic, iron, strychnine, phosphorus, and quinine, along with cod-liver oil and malt extracts. Other medicines, by diminishing reflex irritations, may be advantageously employed—*e.g.*, the bromides. Thus, one patient who had scarcely slept any for months, when put on full doses of bromide of potassium every few hours during the day, got back the habit of sleeping in the course of a week or two.

In recurrent mania it seems to me the patient should be secluded on the first indication of an attack, and quiet and rest enjoined to body and mind.

Smart purgation, *e.g.*, by croton oil (2 minims), lessens maniacal excitement, possibly on account of its exhaustive effects, but I also think on account of its derivative action on the brain.

Frequently one has occasion to feed patients by the stomach tube. To do this skilfully requires some knack. It is pitiful to see a bungling hand torturing a patient in attempting to pass the tube into the œsophagus. A good plan is for an attendant to sit on a chair, with the patient sitting on the floor with his back to the attendant and partially clamped between his knees, his arms likewise being secured. The mouth is then gagged, and the tube lubricated with soap. Two fingers of the left hand should be placed over the tongue of the patient. The tube should then be conveyed to his mouth, and passed over the fingers to the back of the pharynx. If the tongue be now well depressed and slightly pushed forwards, the tube will readily pass if urged onwards and slightly to one or either side, so as to avoid the epiglottis. When the tube has well entered the œsophagus the fingers of the left hand may be slightly relaxed, in order to give the patient a breath or two. If any difficulty be experienced, one of the fingers on the patient's tongue may guide the point of the tube, when it will be readily passed. When the tube is passed the rest of the steps in feeding is quite simple.

CURRENT TOPICS.

DR. THOS. F. TANNAHILL, formerly one of the sub-editors of the *Glasgow Medical Journal*, has resigned the editorship of the *Caledonian Medical Journal* in connection with his departure to South Africa, where he intends to reside for a number of years. The Caledonian Medical Society is deeply indebted to Dr. Tannahill for his work on behalf of its *Journal*, which was first printed at his instigation. The large increase in recent years in the membership and influence of the Society is attributable to the conspicuous success of the *Journal* under Dr. Tannahill's management, and some of the members indicated their appreciation of his services by a gift presented to him before he sailed. Dr. Tannahill is an enthusiastic antiquarian, and has done good work in medical literature.

BRITISH PHARMACEUTICAL CONFERENCE.—The recent meetings of this Conference in Glasgow have doubtless ceased to occupy any important place in the minds of our readers; but it is perhaps still worth while to allude to the excellent address delivered by the President, Dr. Symes, on the 10th August last. All true medical men must sympathise with the aims of this annual Conference, for these include not only the advancement of all departments of pharmaceutical science but also an uncompromising adhesion to the principle of purity in medicine.

The British Pharmaceutical Conference was born at Newcastle-on-Tyne in 1863, and has since then held thirty-four annual meetings in some thirty different centres; heard and discussed about seven hundred papers, many of them the result of much labour and research; and made many grants in money for the advancement of knowledge which is made available to all people alike. At the first annual meeting in 1864 there were 150 members; in 1873, ten years after the foundation of the Conference, the membership had risen to 2,000. A society such as this has important duties to fulfil towards the public as well as towards its members, and medical men should not be alone in viewing with satisfaction the diligence with which these duties are carried out.

ARMY MEDICAL SERVICE.—The following is a list of the successful candidates for commissions in the Army Medical Staff at the recent examination in London (arranged in order of merit):—H. O. B. Browne-Mason, B. Watts, H. G. Martin, F. S. Penny, S. de C. O'Grady, T. H. Gloster, J. G. Berne, A. H. O. Young, J. E. S. Old, F. F. Carroll, J. D. G. Macpherson, W. P. Gwynn and C. J. O'Gorman (equal), M. M. Lowsley, N. H. Ross, E. A. Bourke, A. C. Lupton, P. H. Collingwood, and G. B. Carter.

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MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1896-97.

MEETING XIV.—7TH MAY, 1897.

DR. WALKER DOWNIE *in the Chair.*

I.—CASE OF CEREBELLAR ABSCESS.

BY DR. BARR.

Dr. Barr showed, as a fresh specimen, a brain and right temporal bone belonging to a man, 45 years of age, who had suffered from purulent middle ear disease for five years, ending in cerebellar abscess, leptomeningitis of the base, and thrombosis of the cavernous sinuses. There was a ragged aperture in front of the right cerebellar hemisphere, just where the latter lies in contact with the internal auditory meatus. This led into an abscess cavity, occupying the greater part of the right hemisphere, and containing pus which had a most offensive odour. There was fibrinous exudation in considerable quantity over the base of the brain, especially at the fissure of Sylvius. There was no purulent formation in the temporo-sphenoidal lobe or other part of the brain, and the condition of the temporal bone showed that the septic invasion from the middle ear took place through the labyrinth and internal auditory canal. The auditory and facial nerves in the internal auditory meatus were reddened, swollen, and matted together. There was neither thrombosis of nor purulent formation around the sigmoid sinus; there was, however, distinct thrombosis of the cavernous sinuses on both sides.

II.—EXCISION OF THE SCAPULA FOR SARCOMA.

BY DR. EDINGTON.

The patient was a girl of 8 years. When first seen there was a fluctuant rounded tumour occupying the infra-spinous fossa of the left scapula. Incision demonstrated the absence of pus, and allowed removal of a portion of the tumour for microscopic examination. The growth being undoubtedly sarcomatous, Dr. Edington removed the entire scapula (27th December, 1896), and there has been no recurrence to date (3rd July, 1897.) Microscopic examination of the tumour showed for the most part spindle cells; there were, however, some rounded cells, and also multinucleated masses of protoplasm.

Mr. H. E. Clark thought Dr. Edington ought to be congratulated on having been so fortunate as to secure his patient so early in the development of the disease. Even here, however, he feared the outlook was not an encouraging one, for in these cases recurrence—and even early and wide-spread recurrence—in the internal organs was almost a certainty. He had published a case which illustrated this statement. There could be no doubt that Dr. Edington's procedure was the right one to adopt, and the fact that the disease had not extended to the bone was decidedly in the patient's favour. The preponderance of spindle cells in the tumour pointed in the same direction. The resulting limb was a very useful one, and the removal of the disease was as complete, and the chance for the patient as good, as if amputation had been performed. The chief disability from the operation was a loss of the deltoid function, and in his own case he had met this to some extent by leaving the acromial end of the spine of the scapula, thus retaining as much as possible of the power of abduction and elevation of the humerus.

Dr. Dalziel considered it of great importance to note that this was not a sarcoma of the scapula in the sense that it was a growth originating from the bone or extending to the bone. Hence it did not, in his judgment, entail such serious probabilities of rapid recurrence as a true sarcoma of the scapula undoubtedly did. He had performed the operation himself and considered the difficulty and gravity of the procedure were by no means great for a major operation. In his case he had attached a portion of the deltoid to the fascia connected with the posterior aspect of the clavicle, and this secured for the patient a more useful limb. The operation was certainly to be preferred to amputation.

Dr. Lindsay Steven said it was very unlikely, in his opinion, that a sarcomatous growth would take origin from the substance of the scapula itself, and therefore he failed to appreciate the distinction which Dr. Dalziel attempted to establish.

Dr. Dalziel replied that whatever might be the pathological position, the clinical consequences associated with sarcoma of the bone on the one hand, and with sarcoma of the muscular coverings on the other, were very different.

III.—MALIGNANT TUMOUR OF THE BRAIN.

By Dr. Barr and Dr. J. H. Nicoll.

Dr. Barr and Dr. Nicoll showed a malignant tumour of the brain originating in the middle ear. The symptoms had simulated temporo-sphenoidal abscess, and the cranium had been opened and the tumour partially removed.

The patient was a boy, 12½ years of age. He was first brought to Dr. Barr, sixteen months before his death, owing to severe pain in the right ear. There had also been a very slight discharge from the ear for three months, and the hearing on that side was very defective. A mass resembling a polypus was seen in the external auditory canal, but not protruding from it; it differed from an ordinary aural polypus in being exquisitely painful to the touch of a probe, which also caused more bleeding than usual. Dr. Barr removed the growth by means of a wire snare, under chloroform; its texture seemed to be peculiarly strong and tough, more like a fibrous polypus than the more common mucous variety, and the bleeding which followed its removal was unusually severe. The growth undoubtedly sprang from the bony walls of the tympanum, the tympanic membrane being almost entirely destroyed. Four months afterwards he was again brought to Dr. Barr with a similar growth, this time protruding from the external orifice of the ear. It was in like manner removed with the snare. Recurrence took place once more, after a few months, and a more radical operation was performed, the growth being not only removed from the external auditory canal, but, opening the mastoid antrum and the other cavities of the middle ear (which were found occupied by similar masses), Dr. Barr cleared them out as thoroughly as possible with a gouge. During all these months severe pain in the ear, and also to a less degree in the head, occurred intermittently, and the sensitiveness of the interior of the ear was so great that nothing could be done without chloroform. The discharge from the ear had also continued. Soon afterwards graver symptoms manifested themselves; these were persistent vomiting for several days, increased headache intensified on the right side, and followed (in a few days) by subnormal temperature and pulse, great drowsiness and stupor, ocular paralysis, and optic neuritis, clearly pointing, as was thought, to temporo-sphenoidal abscess, and it was decided, after a consultation with Dr. James H. Nicoll, to trephine the skull in the usual situation for temporo-sphenoidal abscess. The operation was attended by great difficulties in connection with the anæsthesia. Probably within ten minutes of the beginning of the operation, and before the skull was opened, the respiration gradually failed till a condition of absolute apnœa resulted, the pulse remaining quite good. Then artificial respiration was carried on, and tracheotomy was performed. For an hour artificial breathing was carried on by Dr. Connal and Dr. Fred. Adams alternately, and although the pulse continued to be perceptible, a fatal termination seemed impending. It was then resolved to open the skull at all hazards. This was carried out under great difficulty owing to the necessary movements of the patient's arms during artificial respiration. Dr. Nicoll, however, succeeded in removing a disc of bone, when a marked bulging of the dura mater presented itself, which was opened with a knife, and then the first spontaneous sob-like inspiration by the patient was heard. The brain (also bulging) was then explored by trocar, but no pus was found. Respiration improved, and the right pupil began to contract. The trephine opening in the bone was now enlarged by Dr. Nicoll with gouge forceps, and the brain again explored by trocar, when there was found a hard resistant mass under normal brain cortex. The cortex was displaced and the mass (grey and firm) was exposed. A good deal of it was shelled out, but on introducing the finger Dr. Nicoll could feel it in and on the temporal bone (*i. e.*, involving base of skull). The patient by this time became partly conscious, moaning, and finally putting his hand up to the head where the wound was. He ultimately rallied so far that he lived till the 2nd August, about two and a half months after the operation.

The growth was of very considerable size, firm in texture, and attached chiefly to the floor of the middle fossa of the skull. It consisted of two portions, the one external to the skull being the extension of the tumour through the operation opening. In this direction the growth became very exuberant after the opening of the skull, so that, during the two and a half months which intervened between the last operation and the death of the patient, portions had to be frequently sliced off by Dr. Nicoll. The chief mass of the tumour, however, was situated within the skull, and although its tissue was found permeating the neighbouring structures, no actual destruction of bone or fibrous tissue had taken place. The mass was, no doubt, directly connected with a similar growth in the middle ear, where the disease really originated. From the middle ear it probably first sprouted outwards into the external meatus in the form of the polypoid looking excrescence corresponding with the fungus hæmatodes of Toynbee. Histologically, the growth appeared to be of the nature of carcinoma, although clinical considerations rather favoured the view of its being sarcomatous.

Dr. J. G. Connal, who had administered the anæsthetic during the operation, read the following note:—

There was nothing in the condition of the heart or lungs to contraindicate chloroform—indeed, I had on three previous occasions given chloroform to this same patient (one of these operations being rather a protracted one), and on all these occasions he had taken the chloroform well.

It will be noticed that the condition of the patient before this last operation was one of advancing and deepening coma.

About ten minutes after the beginning of the operation I noticed that the breathing was becoming shallow and embarrassed, though the pulse at the wrist was full and regular. The operation was discontinued. The patient was turned on his back and the tongue pulled forward, but notwithstanding this the breathing became more and more shallow, and finally ceased. Artificial respiration was at once resorted to, and air entered the lungs quite freely, but so soon as artificial respiration was discontinued matters were as before. There was no voluntary attempt at breathing. It was perfectly evident that there was no laryngeal or tracheal obstruction to the free entrance of air into the lungs; but, after some time, a little mucus gathered at the back of the throat, and it was considered advisable to perform tracheotomy. This was done by Dr. Nicoll, but still there was no respiratory effort, and we were confronted by the difficulty that the patient made no attempt to breathe while all this time his pulse was good. The patient's face was now of an ashy-grey colour, and, as showing the degree of apnœa, the anal sphincter relaxed. For one hour and ten minutes we performed artificial respiration, when it was suggested that the skull should be trephined. Dr. Nicoll rapidly did this, though working under the great disadvantage that he operated while we were keeping up artificial breathing. As soon as the disc of bone was removed from the skull there was a bulging of the membranes, and now for the first time the patient made a voluntary effort to breathe, shallow at first, but shortly after that a deeper breath. The pulse, which had been good all this time, was now noted to be a little weaker.

Dr. Nicoll was meantime removing portions of the growth, and soon respiration was quite established; indeed, it was not long before the patient began to cry out and to raise his hand to his head. The right pupil, which had been much dilated before and during the operation, now began to contract, and the operation was finished without the further administration of chloroform.

The anæsthetic employed was Duncan, Flockhart & Co.'s pure chloroform, and the method adopted was the drop method on the open mask. I don't think I had used much more than 1 dr. of chloroform from the time the patient was placed on the table till the operation had to be suspended on account of the apnœic condition supervening.

What can have given rise to the condition impeding voluntary respiration might be a matter for some speculation, but it was probably due to intracranial pressure, leading to œdema of the brain and distension of the ventricles. The fact that immediately after the trephine opening was made the membranes bulged outwards and there was a voluntary effort at respiration seems to point to this conclusion.

It is acknowledged that chloroform has a definite risk in cases like this, and Professor Macewen has emphasised this in his work on *Pyogenic Diseases of the Brain and Spinal Cord.*

Mr. H. E. Clark had suffered from a somewhat similar experience, as far as the chloroform difficulty was concerned, in a case of cerebellar abscess. He was only sent for when the chloroform difficulty arose, and knew nothing of the history or nature of the case. No intracranial condition was known to exist, although when the condition of apnœa developed suspicion arose, and a suggestion to open the skull was made, but was not adopted. Tracheotomy was performed, but without benefit. Artificial respiration was maintained for upwards of twenty-four hours, and on *post-mortem* examination the cerebellar abscess was discovered. These experiences conveyed a very obvious lesson in regard to the administration of chloroform in cases where there was abnormal intracranial pressure.

Dr. Alex. Robertson remarked on the diagnosis of abscess which was made in the case. He considered some of the facts formed a basis for an opinion in opposition to that view.

This was especially true of the progressive and, in the end, extensive paralysis of the ocular muscles, which was not to be expected from intracranial abscess. The severity of the optic neuritis, too, was much more suggestive of tumour, as was also the intensity of the pain. Too much weight might be placed on a low range of temperature and a slow pulse as indications of the existence of abscess. The facts, as stated, seemed to him to carry a diagnosis of tumour rather than one of abscess. In reference to the failure of the respiration during chloroform administration, he had seen the case quoted by Mr. Clark, and agreed that the condition was probably due to congestion or œdema increasing an intracranial pressure already much in excess of the normal.

Dr. Lindsay Steven, from the examination of the specimen, would have been inclined to conclude that the origin of the tumour was intracranial, and that in its extension it had involved the middle ear. Such a large growth within the skull, compared with the small size of the portion presenting in the external meatus, seemed to him very unlike what one would expect in a tumour arising outside the cranial cavity. He thought, on the whole, that the growth was a sarcoma.

Dr. Workman acknowledged the great difficulty he felt in deciding between the carcinomatous and sarcomatous theory of the tumour. The sections in some respects certainly suggested cancer, but, regarding the case as a whole, his verdict would be in the other direction. He suggested that a number of sections stained with various agents should be prepared. In this way histological grounds for a confident conclusion would probably be obtained.

Dr. Barr, in reply, said he had never before seen a case in which chloroform produced anything like the condition observed in his patient. He readily assented to the remarks made by Dr. Robertson. Probably one was too ready to conclude that when, with a history of discharge from the ear, symptoms of intracranial complications arose, the case was one of abscess. Looking back, it was evident that another interpretation might have been put on the case before operation was recommended. It was unfortunate that the tumour removed from the external meatus had been lost, and so its microscopical significance was unknown. Had it been examined when removed, the diagnosis would probably have been different, though, he must say, there was little or nothing in its general character to give rise to suspicion.

MEETING XV.—14TH MAY, 1897.

The President, DR. W. L. REID, *in the Chair.*

I.—SEPTIC THROMBOSIS OF THE LATERAL SINUS FOLLOWING INFLUENZA—OPERATION—RECOVERY.

BY DR. WALKER DOWNIE.

The patient was brought before the notice of the Society as an example of extensive and deep-seated mischief beginning as a middle-ear catarrh, the result of epidemic influenza, in a man well advanced in life (age 66), and as a case of complete recovery following an extensive septic thrombosis of the lateral sinus.

A chart of the temperature was also exhibited, the peculiarity of which was that for two weeks after operation the temperatures registered were for the most part subnormal, ranging from 96·4° to 98° F. Convalescence was in other respects most satisfactory, and he was dismissed well within three weeks from the date of operation.

Mr. H. E. Clark commented on the low range of the temperature prior to operation. This he considered rather remarkable seeing that the case was a septic one, and the patient not in a condition of coma. Possibly the presence of so much pus inside the cranium, and the consequent increase in the intracranial tension, was the explanation. He was accustomed to large waves of temperature disturbance in similar cases.

Dr. Alex. Robertson thought it more probable that the absence of fever was due to some circumstance which had prevented the absorption of septic matter into the blood.

Dr. Downie, in reply, remarked that the patient was only two days under observation when operation became imperative. Hence it was possible there had been more febrile reaction earlier in the case, and this might have been repeated had the operation been delayed. But the circumstances rendered delay impossible.

II.—EXCISION OF THE LONG BUCCAL NERVE FOR FACIAL NEURALGIA.

BY DR. T. K. DALZIEL.

The patient, a woman of 58 years, had suffered for seven years from extremely severe facial neuralgia, involving all the branches of the right fifth nerve. The pain had been continuous, and was most marked at the angle of the mouth. At times the area supplied by the long buccal nerve was alone affected, the sensation being described as an "intense burning feeling."

During these seven years all the usual remedies had been tried without avail, so that the patient had made up her mind to endure her agony. She, however, consulted Dr. Stark, who sent her to Dr. Dalziel.

As the pain seemed to originate in the long buccal nerve, and to be most intense there, though ever and anon spreading to the other branches of the fifth, it was determined to excise the nerve. An incision in the line of the facial branches was made below Steno's duct, the border of the masseter identified, and the zygomaticus major divided. The buccal pad of fat was removed, and the nerve found on the buccinator muscle under cover of the anterior margin of the coronoid process. The nerve was seized as near its root as possible and torn away. Altogether about 1½ in. of nerve were thus removed. The wound healed in a few days with almost no deformity, though since the operation the scar had become depressed to an appreciable extent, probably due to the absence of the buccal pad of fat. Since the operation three and a half months ago there had been absolutely no pain, and the patient is evidently in excellent health.

Mr. H. E. Clark drew attention to the operation in which the nerve is reached through the buccal cavity. It was quite possible to remove a considerable length of the nerve in this way, and the operation had the advantage of not risking the facial nerve, and of not leaving a cicatrix on the face. The method was well worth keeping in mind.

Dr. Dalziel had considered the plan alluded to by Mr. Clark, and possibly in a younger patient he might have run the risk of a septic wound in the buccal cavity for the sake of avoiding an external cicatrix. But in the present case his decision had been in the opposite direction, and he thought rightly so; the patient herself also was quite satisfied.

III.—EXCISION OF A SIMPLE STRICTURE OF THE RECTUM BY KRASKE'S METHOD.

BY DR. T. K. DALZIEL.

The lad, aged 4 years, had been born with an imperforate anus, relieved by the passage of a pair of dressing forceps through the septum. Since birth this aperture had been kept open by the use of bougies, and more usually by the mother's finger. Before each evacuation of the bowels the finger had to be inserted, causing great suffering, and for the last year inducing very constantly some bleeding. Dr. Leitch, of Gourock, recognising the necessity of interference, had sent the boy to Dr. Dalziel. On examination it was found that the rectum was narrowed to almost complete occulsion 1½ in. from the anus, and was surrounded by a mass of cicatricial tissue preventing dilatation of the stricture, which could only be relieved by crushing through the ulcerated tissue.

It was determined to excise the stricture, and suture the portions of rectum together. This was done through an incision over the sacrum. The coccyx and two lowest sacral vertebræ having been removed, the rectum was cut through above and below the stricture, which, with the surrounding mass of cicatricial tissue, was removed. The stricture involved about 1¼ in. of the rectum.

Suturing was difficult owing to the rectum above the stricture being much dilated and with thin walls, while below it was much contracted and with hard, thick, callous walls. Only a portion of the circumference of the upper segment could be attached to the lower.

The patient made a good recovery, and though there is still some tendency to narrowing of the lumen of the bowel, it gives no trouble, and is easily kept dilated by the passage of a bougie every few weeks. The bowels act daily without trouble, and, as the patient shows, there is little evidence of this somewhat extensive operation on external examination.

IV.—CASE OF GANGRENE OF THE LUNG TREATED BY EXCISION OF THE GANGRENOUS TISSUE.

BY DR. T. K. DALZIEL.

The patient, aged 10 years, was a stout, healthy-looking lad. He had been first seen by Dr. Dalziel, with Dr. Smith and Dr. Cunningham, in Dumfries last autumn. The history indicated the cause of the lung trouble to be the inhalation of a portion of toast sometime previously, and which caused complete suffocation, brilliantly relieved by an immediate laryngotomy by Dr. Lawson, of Dunbar, where the child was staying at the time. From this time the symptoms of lung trouble commenced, a pronounced pneumonia leaving a consolidation which showed little tendency to clear up. A fortnight before the operation patient had a sudden and violent accession of symptoms, with high temperatures, and physical signs suggestive of fluid in the chest. On examination the most striking feature of the case was the extreme stench from the patient's breath. There was no expansion of the affected side of the chest. No displacement of the heart. The child looked extremely ill. A hypodermic needle enabled us to withdraw a small quantity of dark stinking fluid.

The chest was opened by removing 3 inches of three ribs, and, the intercostal arteries having been ligatured, the pleura was turned back as a flap. The visceral and parietal layers were adherent. A thin layer of lung was divided, and numerous sloughs of lung tissue removed after ligation of their attachments. The cavity was gently irrigated and drained.

Immediate improvement set in, but as the ultimate sinus had not closed, it was now proposed to open up the sinus and find the cause of non-healing.

The boy's general condition was evidently very good, though the whole of the left side of the chest was dull. His temperature had been normal for some time, and he was daily putting on flesh.

Mr. Clark congratulated Dr. Dalziel on the boldness and success of his operation. The result must be regarded as a distinct encouragement to urge surgical interference in such cases.

Mr. Maylard regarded the case as one full of interest and instruction. He had never seen a case of this kind in which operative measures had been successful. It was certainly fortunate that when the whole lung was dull to percussion the necrotic area was found on operation, and this experience would be an encouragement to other surgeons. The existence of a very fœtid odour in the breath, which was noted in this case, he had observed before in children when a foreign body had gained admission to the lungs, and he considered it a symptom of great significance. The persistence of a sinus in Dr. Dalziel's patient was suspicious of some foreign body still present in the lung. He would like to hear if during the operation anything to account for the mischief was discovered. Mr. Maylard referred, in the course of his remarks, to several cases in which the admission of foreign bodies—in one instance a tooth—had been followed by gangrene of the lungs.

Dr. Pride had some years ago seen a similar case in which the foreign body was a horse-bean.

Dr. Lindsay Steven gladly recognised the interest and value of the case, but wished to know what was the precise indication which led to the selection of the site for operation, and what was expected from the operation, seeing that over the entire lung there was dulness on percussion. These questions seemed to him to involve important difficulties in dealing with such cases by surgical measures. The condition of the pleura was also an important point, and he would like to hear what Dr. Dalziel would advise if no adhesions existed.

Dr. Dalziel, in reply, stated that the passage of an aspirating needle detected fœtid fluid, and, though only a few drops came away, this was a direct guide for operation. Fortunately the pleura was adherent, but had it not been so he would have taken steps to secure adhesion before incising the lung. In another case in which he had operated he had stuffed the pleural cavity with iodoform gauze and then washed out the cavity in the lung, the condition of the patient forbidding delay or further operative measures. The nature of the foreign body in the present case rendered the chance of its detection unlikely or even impossible.

V.—CASE OF CEREBRAL TUMOUR—OPERATION—DEATH.

By Mr. H. E. Clark.

The patient had been under the care of Dr. T. K. Monro and and Dr. Alex. Robertson, and these gentlemen submitted the clinical history as far as this was known prior to the man's admission to Mr. Clark's wards in the Royal Infirmary.

Dr. T. K. Monro—This patient was under my care as an out-door patient for nine months—viz., from March to December, 1896, or to within six weeks of his death. He had good health till about Christmas, 1895, when he began to suffer at times from what the doctor thought was liver disorder; he had headache, sickness, and pain in the back, but no vomiting. Early in February he had two short attacks of vertigo. In the latter part of February he became subject to attacks of numbness and weakness on the left side, beginning in the upper arm, halfway between shoulder and elbow, passing down to the hand, and thereafter, while the upper limb was recovering, affecting the lower limb in the same way from above downwards. The face was not affected. The leg in such an attack was flaccid; there was never spasm or twitching.

For a time the diagnosis was very doubtful. Thus, with regard to the three so-called cardinal symptoms of intracranial tumour—headache, vomiting, and optic neuritis—the first seems to have been unimportant up to the time of his first visit, and at the time of the visit was quite absent; whilst the patient could not remember having ever vomited in his life, and his optic discs were normal.

The result of treatment by bromide and iodide of potassium was encouraging for a short time, but during the summer he had attacks at least once a week. About the beginning of September he had twitching of the left arm, and a fortnight later, the same symptom, followed by loss of consciousness and general convulsions. He had headache all day before this attack, but no vomiting; otherwise he had no headache between his attacks. About this time, it was ascertained that one sister took fits, and another had had chorea; and as it was noted in November that the fits seemed to be very greatly under the control of the bromides, there was still a possibility that the disease might not be due to gross changes. As late as 27th November the optic discs were noted as normal.

Three weeks later (11th December, 1896) patient came to see me in another part of the hospital, just before he entered Dr. Robertson's ward as an in-door patient. His condition had changed considerably. He had paræsthesia of the left limbs, especially of the leg; hemiparesis of the left side (including the face); constant and sometimes agonising vertical headache; slight defect of vision now present for a fortnight, and commencing double optic neuritis. There could no longer be any doubt that the patient had an intracranial tumour.

Dr. Alex. Robertson—The patient was admitted to my wards on 19th December, 1896. I formed the opinion that he was suffering from a tumour of the brain, the probable site of the tumour being the motor area of the cerebral convolutions. The grounds for this opinion were (*a*) severe and intermittent headaches, affecting the right side; (*b*) attacks of vomiting; (*c*) left unilateral fits, mostly Jacksonian in character; (*d*) partial effacement of the left naso-labial fold; (*e*) presence of left ankle clonus and exaggeration of left knee-jerk; and (*f*) latterly, intense neuro-retinitis. The absence of tenderness on digital percussion of the skull, and the freedom of the history from middle-ear disease or from any other event likely to lead to suppuration within the cranial cavity, were also noted.

The exact situation of the tumour in the motor area was somewhat uncertain. At first the fits were in the arm, and there was evidence of slight left facial paresis, but latterly the development of left ankle clonus and recognised weakness in the left lower limb seemed to show that the motor centres for the leg were largely involved. I quite agreed with Mr. Clark that an operation should be performed. The result of the operation Mr. Clark will describe. One or two special features of the case may be noted. The prominence of the sensory symptoms in all the spasmodic seizures is explained by the subcortical position of the tumour leading to implication of sensory fibres. The absence of pain on percussion of the skull was also due to the deep position of the tumour. The late appearance of optic neuritis is not uncommon in the case of tumour, especially when the growth is situated towards the anterior part of the brain.

Mr. Clark stated that the patient was removed to his wards on 8th January, 1897. Soon after admission he vomited twice, and there were marked twitchings of the left arm and left side of the face. Patient was very restless, and complained of great pain in the back of head. Temperature, 99·4° F.; pulse, 68; respirations, 18. On the following day (9th) it is noted in the Ward Journal that there was paresis of left leg and left arm, especially left forearm. Patient complained of less pain, was drowsy, and slept much. On the 10th there was complete retention of urine. On the afternoon of this day trephining was performed, a large "omega" flap being raised over the motor area of the right side, and the whole of the structures (including the periosteum) turned down. A 1¼ inch trephine was applied over the arm centre, and the disc of bone being removed, the aperture was further enlarged upwards by means of rongeur forceps. The dura was found to be greatly congested, and there was great tension of the brain substance. The dura was laid open, and there was found to be marked congestion of the vessels of the surface of the brain, but that organ pulsated freely over the whole exposed area, and there was no appearance of any tumour. A searcher was introduced into the brain and made to penetrate for a distance of 2½ inches in various directions, but no fluid was reached, nor did the instrument appear to meet with any more resistant substance than normal brain tissue. Reluctantly, therefore, the wound was closed, the operator being convinced of the presence of a tumour on that side of the brain, but satisfied it was not removable through the opening made. The day after the operation it was reported that the patient had remained unconscious since the operation, and that there was almost complete paralysis of left arm and leg. At 8 P.M. temperature was 103° F.; pulse, 142, feeble; urine retained. Consciousness returned on the 12th, but he never regained intelligence; he was very restless, throwing his right arm and leg about and endeavouring to remove the dressings from the head. The wound was dressed on the 17th January, when there was found to be some protrusion of brain substance through the trephine opening, and a free escape of cerebro-spinal fluid, but no suppuration. On the 20th January he again became unconscious, and remained so till his death, which took place on the 25th, fifteen days after the operation.

Mr. Clark, in commenting on the case, stated that the arm area was selected because the convulsive seizures invariably commenced in the left arm, and the loss of power was greater in the arm than in the leg. As the tumour was situated beneath the superior parietal gyrus it could only have been reached by an opening much higher up and further back than that actually made. At the time of the operation the propriety of making a large osteo-plastic flap, such as would expose the whole motor area at once, was discussed, but was negatived as being unduly severe, and the localisation signs appeared sufficiently definite. Had the whole area, however, been exposed it is doubtful if the tumour would have been found, for it was not situated in the cortex, but in the subcortical part of the hemisphere, and was covered by healthy cortex. Further, if identified it is not certain that it could have been removed, not being encapsuled, and its definition being very imperfect. He thought the case an important one, as showing how misleading the motor symptoms sometimes were, and he suggested that tenderness on percussion and site of pain were often more important than motor symptoms. In this case, although pain on percussion was not very marked, it was certainly more easily elicited over the upper parietal region than elsewhere.

Dr. Workman described the position of the tumour in the superior parietal convolution. It was distinctly denser and more firm than the surrounding brain tissue. Microscopical examination showed it to be a glio-sarcoma.

Mr. Maylard had operated successfully three and a half years ago for a sarcoma of the frontal lobe, and had then encountered the same difficulty which Mr. Clark had met with —viz., the fact that the tumour was not situated exactly in the position suggested by the symptoms. In his own case, though the evidences pointed to irritation of the motor centres, the tumour was entirely in front of the motor area. He considered these cases showed that allowance must be made for the indirect pressure effects capable of being produced by a tumour upon portions of the brain not immediately in contact with the tumour mass. It was only by making a very large opening in the skull that he had been able to detect and remove the tumour in his case, and such procedure was justifiable, and might indeed be essential. His operation was followed by hernia cerebri, compelling him to slice away pieces of the brain, but ultimaltely he performed a plastic operation, and this proved successful. Paralysis, however, followed—a result, doubtless, of the loss of brain substance. The possibility of success in these cases was much influenced by the fact whether the tumour was or was not encapsuled.

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1896-97.

MEETING VII.—24TH MARCH, 1897.

The President, DR. MALCOLM BLACK, *in the Chair*.

I.—HYDROSALPINX.

BY DR. T. W. JENKINS.

This very typical example of hydrosalpinx—it is from the right side—was obtained in the course of an operation for the removal of an intra-ligamentary ovarian cyst on the opposite side. The sac when found was quite flaccid, and lay perfectly free at the bottom of Douglas' pouch.

The subject of this case was a married woman, 30 years of age, who came to the Victoria Infirmary Dispensary in December of last year, complaining of severe pain in the left iliac region of a year's duration, and of frequent profuse hæmorrhage in the preceding three months. Micturition also was frequent and painful.

I found the uterus displaced laterally to the right of the middle line, and the left half of the pelvis occupied by a tumour which extended from the roof of the vagina into the iliac fossa, and on the median aspect was in contact with the left margin of the uterus from cervix to fundus. The tumour, further, was non-fluctuant, painful on pressure, and immovable.

Diagnosis.—Cystoma ovarii sinist. intra-ligamentare. On the 30th October I opened the abdomen and removed the adnexæ on both sides. The cyst was multilocular, hence not parovarian.

The patient made a good recovery, and is now in perfect health.

II.—OÖPHORO-SALPINGITIS BILATERALIS—HYDROSALPINX—PERISALPINGITIS.

By Dr. T. W. Jenkins.

The subject of the second case was a patient of Dr. William M'Millan's, and had long suffered from dysmenorrhœa and pelvic pain. Examining in anæsthesia we found the left appendage to form an immovable fairly-cystic mass, the outer end in contact with the pelvic wall. The right adnexæ were not directly accessible to palpation.

Operation being indicated, and the vaginal route considered and rejected—the patient was a nullipara—I opened the abdomen on 10th March and removed the appendages on both sides (permission having been obtained for this eventuality).

The condition of the parts was as follows:—Right tube: isthmus and ampulla slightly thickened; abdominal end closed and blown out into form of three thin-walled cysts; hydrosalpinx. Right ovary: not much enlarged, but greater part occupied by a cyst full of blood-stained serum. Adhesions between tube, cysts, and ovary; perisalpingitis, perioöphoritis. Left adnexæ were difficult to free. Proximal part of tube not much thickened, but adherent to ovary. Ligamentum infundibile pelvicum firmly adherent to sigmoid flexure. Ovary embedded in adhesions; its greater part occupied by a cyst like that on opposite side. Douglas' pouch traversed by thin adhesions extending from uterus to adnexæ on both sides, and to bowel on left.

The abdominal wound closed in three stages. The operation, which lasted three quarters of an hour, was greatly facilitated by previous distension of the rectum (the ordinary rectal bag being used) and consequent elevation of the pelvic organs.

The patient made an uninterrupted recovery.

III.—A CASE OF RUPTURE OF THE UTERUS.

By Dr. Malcolm Black.

A. R., aged 28, primipara, was admitted to the Glasgow Maternity Hospital on the evening of 8th February, on account of contracted pelvis, and was then supposed to be at the end of the eighth or entering the ninth month of pregnancy.

Examined under chloroform the diagonal conjugate was determined to be slightly under 4 in.; the true conjugate was therefore estimated as at least 3 in., if not more. Patient had old hip-joint disease with anchylosis of left hip-joint, limb in position of flexion.

Labour was induced by bougie and Barnes' bags, and came on rather tardily. On the morning of the 13th February, the os being well dilated, our resident applied Simpson's axis traction forceps, but after steady traction for some time the head showed no tendency to enter the pelvis. He then summoned me to the hospital. My first instinct was to perforate, but finding the child's heart was beating strongly, and believing that I had at least a 3 in. true conjugate to deal with, I was loth to do so without giving the baby another chance, so I decided to try Professor Cameron's antero-posterior compression forceps, and with these, making considerable compression, the head began to descend and the child was extracted, when it was found to be dead, its skull being crushed. Child weighed 7½ lb.

The uterus contracted well on the placenta, which, however, showed no sign of leaving the uterus, till in about an hour it gradually came down a bit and was then expressed. The patient, who seemed in fairly good condition after the birth of the child, now became a little collapsed. A hot douche was given. The nozzle went into the uterus easily, and on pushing it slightly to the left of the fundus it evidently passed into the abdominal cavity, and there was no return of the fluid (1 in 120 carbolic solution). The nozzle was immediately disconnected, and the fluid drained away. The patient now became rapidly collapsed, and death took place shortly after, all efforts to revive her with stimulants having failed.

At the *post-mortem* examination a transverse rent, 2 in. long, was found on the posterior wall of the uterus, just opposite the promontory of the sacrum. The pelvis presented a marked deformity, with great prominence of the sacrum and compression inwards of the left side. The antero-posterior diameter of the brim (true conjugate) measured 2¾ in., the right oblique 4½ in., the left 4¼ in., and the transverse 4⅜ in.

Dr. Samuel Sloan asked whether there had been any attempt at turning, how the rupture was accounted for, when the placenta came away, and how long it was after this till the symptoms of shock were observed.

Dr. Robert Jardine said he had not been present at this case. He found it very difficult to explain the fatality, as the *post-mortem* showed that there had been no hæmorrhage into the peritoneal cavity, and there was little or no free fluid of any kind in it, although it seemed that the patient collapsed immediately after the injection of the solution.

Dr. Samuel Sloan said he had never felt sure that pressure on the promontory was sufficient to cause rupture. With regard to the axis traction forceps, he thought it was liable to become too much of a machine, and there was too little of the human hand.

Dr. Pollock said that death was evidently due to shock. Judging from the dimensions of the pelvis and the difficulty of the case, he thought it was possibly one where early turning before rupture of the membranes would have been beneficial.

Dr. Oliphant referred to a case seen by Dr. Sloan and himself, where there was no previous instrumental interference, and yet rupture had taken place; and he remembered a case of his own, where there was a hole in the cervix, although nothing had been done. There were cases on record where hot water was believed to have caused shock.

Dr. Black, in reply, said that as regards the mechanism of the rupture he had seen a similar rent, but not extending through the whole uterine wall, and he believed this to be due to pressure. At the same time, as was well shown by the cast of deep depression of a child's cranium which he exhibited to the Society, the uterus could bear a very great amount of pressure. As to early turning, the membranes had already been ruptured, so the choice lay between craniotomy and antero-posterior compression.

IV.—SPECIMENS.

By Dr. Robert Jardine.

1. Dr. Jardine showed a photograph of a child, eight days old, with a considerable depression of the left temple caused by the pressure of the promontory. The diagonal conjugate had been 3¾ inches. The cord had prolapsed. He applied Milne Murray's new form of axis traction, with the traction bar set slightly under 3 inches. Delivery was effected very quickly in the ordinary obstetrical position. The depressed bone had risen slightly.

2. He also showed a ruptured uterus. The patient was an 8-para. She had a slightly contracted pelvis. Most of her

former labours had been instrumental, but one child had been born at full time naturally. The labour had lasted two and a half days. Before admission to the Hospital two medical men had attempted to deliver with forceps, but had failed. They had then tried to turn, with disastrous results. Dr. Jardine found one foot in the vagina and the other entering the brim. The placenta was lying loose, and on removing it he found a large rent in the left side of the uterus, extending obliquely through the cervix and upper part of the vagina. The body of the child was in the abdomen. The uterus was firmly contracted. He delivered through the passages, perforating the after-coming head. The patient did not seem any more collapsed after delivery. Dr. M. Cameron saw her in consultation, and they decided to extirpate the uterus. The abdomen contained a large amount of clot. The uterus was amputated at the isthmus and the cervix dissected out. The vaginal vault was closed by interrupted sutures. The operation took an hour and a half. The patient died from shock about ten hours later. The uterus was shown and also the vagina, which had been removed *post-mortem*.

3. He also showed a six months' pregnant uterus with the fœtus *in situ*. The patient, a primipara, had been admitted in a comatose condition, suffering from eclampsia. She had had eight fits before and took four more after admission. Labour had begun in the morning, but the os would only admit one finger. Her pulse was very weak. He tried a saline injection into the areolar tissue of the right axilla, and the pulse had improved considerably. The membranes were ruptured, and dilatation attempted, and incisions made through the cervix, but without avail. She died four hours after admission. Her urine was loaded with blood. The liver was found to be in a condition somewhat like commencing yellow atrophy, but a full report will be given subsequently. Dr. Jardine remarked that since 1st March he had had three cases of eclampsia under his care in the Maternity. The other two had recovered.

4. He also showed a puerperal uterus from a case of persistent vomiting. The patient had been admitted from the country, about seven months pregnant, with a history of severe vomiting of large quantities of coffee-ground material. The fœtus was dead. It was expelled in the membranes the day after admission without the patient being aware she was in labour until the last two pains. She never vomited after admission, and in spite of vigorous stimulation and feeding she gradually sank, and died on the fourth day. There was an

ante-mortem clot in the heart and some hæmorrhagic points were seen in the stomach.

Dr. Samuel Sloan asked if in the case of eclampsia there was any evidence of internal hæmorrhage.

Dr. Black replied that there was not. There was a dark fluid in the stomach, but she had bitten her tongue and there was bleeding at the mouth. The cause of death was not cleared up by *post-mortem* examination.

Dr. Munro Kerr asked if in the case of vomiting there was any history of alcoholism. In such a case reported, and also in one of his cases, the vomiting had ceased, but the patient had not recovered.

Dr. Jardine, in reply, stated that there was nothing remarkable about the placenta. There were no infarcts.

Dr. Pollok had had fortunate results in eclampsia. He did not wait to dilate with Barnes' bags. It was usually easy to dilate with the hand.

Dr. Oliphant pointed out that the os was not always so easy to dilate, and that sometimes the os was practically undilatable. He thought that saline injections might prove to be useful.

Dr. Balfour Marshall referred to an experience he had had in consultation with a doctor in the country, when Champetier de Ribes' bag had given way in his hands although carefully used.

Dr. Malcolm Black favoured dilatation with the fingers, but pointed out that now and then a case was met with where dilatation was difficult, and it had been his experience that where dilatation was difficult with the finger it was not easy with the bags. In most eclamptic cases he had turned.

Dr. Jardine said that he believed in the forceps in such cases.

V.—THE RETRACTION RING AS A CAUSE OF OBSTRUCTION IN LABOUR IN BREECH CASES.

By Dr. Robert Jardine.

Patient was 39 years of age, 11-para. Her former labours had been easy, except the last one three years ago, when I had delivered her with forceps of a very large child. The membranes ruptured in the morning, but the pains did not come on until 2 P.M. By 9 P.M. the breech had descended into the cavity, and the pains were very strong. As there was no advance, the nurse whose case it was sent for me at 10 P.M. I found the breech low down L.S.A. The uterus was firmly moulded round the body, and the contractions were very strong; but no advance was being made.

The patient was put deeply under chloroform, as I wished to find out the cause of the obstruction before delivering in the usual way by means of traction on the groin. On passing my hand in I found, as I expected, the legs extended. The retraction ring was very distinct, forming a distinct shelf or ledge round the interior, and the feet were hooked above it. The cause of the arrest was perfectly plain, as no descent could take place so long as the feet remained above the ring. The uterus was so closely moulded to the body of the child that I had some difficulty in unhitching the feet and drawing one of the legs down. The body was easily drawn down; but, in spite of firm suprapubic pressure, one of the arms passed up. The elbow, I suspect, was caught by the ring. When it was freed delivery was easily accomplished. The child, a large male, was alive. The mother made a good recovery, getting up contrary to all orders on the second day.

It has been pointed out by Dr. Helme that, in transverse cases where the uterus is firmly contracted round the child, the shoulder may be caught under the retraction ring. In doing version in such a case the shoulder must be freed before the body will turn. In my case the feet were hitched above and not under the ring.

In several breech cases with the legs extended I have experienced considerable difficulty in delivering by means of traction on the groin, and have always been puzzled to account for this. In one case I broke a femur while making traction with a handkerchief. I think it is very probable that the feet were caught in the same way. Early rupture of the membranes allows of the liquor amnii thoroughly draining away, and the uterus becoming closely applied to the body. As descent begins, the feet are apt to be caught and the legs become extended. So long as the feet are above the ring no further descent can take place unless considerable traction is applied.

It seems to me that this action of the retraction ring explains the delay in breech cases where the legs are extended. If any Fellow has a better explanation I trust he will bring it forward to-night.

Dr. Samuel Sloan said that traction had not been successful in his experience. He would give opium or a hypodermic injection of morphia to secure relaxation, and apply the forceps.

Dr. Robert Pollok considered it a dangerous thing to wait for spontaneous evolution.

Dr. Malcolm Black said that Dr. Jardine's explanation required consideration. He remembered a case of impacted breech where this did not occur. Hitching of the feet in a retraction ring could not be common.

Dr. John Lindsay thought this was not an explanation of all cases. He could remember such a case where he had tried hook and fillet. He found one leg was acting as a "strut."

VI.—NATURE'S METHODS OF DELIVERY IN TRANSVERSE PRESENTATIONS.

BY DR. ROBERT JARDINE.

The delivery of a live child by natural efforts in a transverse presentation is of sufficient rarity to warrant my placing the following case on record. The case occurred in the out-door work of the Maternity Hospital, and I am indebted to Dr. Carmichael for the notes.

Mrs. K., age 27, 6-para. A student was called to the case about 11·30 P.M. on 21st January, 1897, and found a transverse presentation, with the right arm prolapsed but within the vagina. The pains were strong. He sent for Dr. Carmichael, the house-surgeon, who found the hand projecting from the vulva. While he was washing his hands a very strong pain came on, and the breech was driven down and body born dorso-posterior. The prolapsed arm was seen to be partly retracted. The head was retained for a little under the pubic arch. The child was very small, and at first appeared to be dead, but soon cried out although left alone.

The labour had lasted fifteen hours, and the membranes were said to have ruptured twelve hours before the case was first seen and about fourteen hours before delivery. The child, a male, was premature (the mother thinks by a month). Three days after birth it measured 16 inches in length, and weighed about 4¾ lb.

This was undoubtedly a case of spontaneous version. The descriptions of spontaneous version and spontaneous evolution are so mixed up in most of our text-books that it is almost impossible to make out which is which. Denman was the first to describe spontaneous version as we now know it; but he gave it the name of spontaneous evolution, which name was afterwards given to another method of delivery by Dr. Douglas, of Dublin. The broad distinction between the two methods is this: in Denman's method of delivery the child turns above the brim in the uterus, while in Douglas's the turning occurs in the cavity of the pelvis. Spontaneous version occurs, then, in the uterine cavity, spontaneous evolution in the pelvic cavity.

In transverse presentations there are four methods of delivery by nature:—

1. Spontaneous rectification. The fœtus very rarely lies absolutely transversely, but is usually oblique, with the head in one iliac fossa and the shoulder over the brim. The head can be felt bulging out the side of the uterus. If the fœtus is freely movable, as the uterus contracts the head may be pushed towards the axis of the brim, and thus become substituted for the shoulder; in other words, rectification may occur. This can only occur during the first stage of labour or at the very beginning of the second, before the liquor amnii has drained away. This probably occurs more frequently than we are aware. If one sees a case early enough, it is worth while trying to assist nature in this process by pushing the shoulder up *per vaginam* and pressing the head into the brim with the external hand. This can only be done during the first stage or at the very beginning of the second. If it is not successful, at all events no harm will be done.

2. Spontaneous version. This method, as I have already mentioned, was first described by Denman under the name of "spontaneous evolution." The arm may, or may not, be prolapsed. If it is, it will not be wholly outside the vulva, as it will be in spontaneous evolution. The body is still within the uterine cavity, the head being jammed tightly into one iliac fossa. The doubled up body is too large to pass the brim. As the uterus contracts firmly it presses on the breech, which is the highest portion of the fœtus. The breech is the only part which is at all movable, and it is gradually driven down until it is forced through the brim and is expelled. The body turns as it were on its own axis. The case then finishes like an ordinary breech. An ordinary sized living child, or one very recently dead, may be expelled in this way. If it has been dead sufficiently long to be softened, or is a very small premature child, it will come through doubled up.

Spontaneous version takes place later in labour than spontaneous rectification, but, like the latter, occurs in the uterus and not in the pelvis. It is supposed to be due to irregular contractions of the uterus, the firmly contracting portion pushing the breech down, while the relaxed portion allows the head to pass up.

3. Spontaneous evolution (Douglas). This occurs in the

pelvic cavity. The presenting shoulder is forced very low down and forwards under the pubic arch. The entire arm and shoulder can be seen, and the clavicle lies under the pubic symphysis. The head is above the pubes, bulging well forwards. As the uterine contractions go on, the side of the chest is forced forwards and the ribs can be felt at the vulva. The clavicle is driven round the anterior part of the symphysis. The breech will now be in the hollow of the sacrum or coming through the brim. Further contractions will drive it down and force it free, and the labour will finish like an ordinary breech.

Spontaneous evolution then occurs in the pelvic cavity. The uterine contractions must be very powerful. A full time child may be born alive in this way if it is a small one and the pelvis roomy, but the great pressure the child is subjected to is apt to cause its death.

4. Spontaneous expulsion. This only happens with dead children whose bodies have become softened. The child is forced through doubled up, the chest and belly coming first, the head and legs being expelled together last. This method of delivery is seen with premature dead children, and also in cases of neglected shoulder presentation in which there has been a cessation of labour. When labour recurs a day or two later the dead fœtus will have softened sufficiently to allow of this.

In this short paper I do not intend taking up the treatment of transverse cases. Personally I have never seen a transverse case finished by nature, as I have never felt justified in leaving the cases alone. I have always been fortunate enough in seeing them soon enough to turn. If any of the Fellows have had the good luck to observe such cases I trust they will give us their experience to-night.

VII.—NOTES OF A FATAL CASE OF SEPTICÆMIA IN AN INFANT SIX DAYS OLD.

By Dr. J. M. Munro Kerr.

The child was born on 24th February, 1897. It presented by breech, was small, and not well nourished. The child lived six days, and was suckled by the mother. On the day after birth it was slightly cyanotic, and it continued so until its death. On 26th and 27th February it suffered greatly from diarrhœa and vomiting. This ceased on 28th February, when swelling of the feet and legs first appeared. The œdema of the feet and legs gradually increased and extended up to the thighs.

The child gradually became weaker and weaker, and died on 1st March.

A *post-mortem* examination was very kindly made by Dr. Ferguson, assistant pathologist to the Western Infirmary. The following is a synopsis of his report:—Umbilicus has a dark gangrenous appearance, the colour fading off into the healthy skin of the abdomen. A small probe passes readily into hypogastric arteries, from which pus can be expressed. On splitting up these arteries, small septic thrombi are found. Cover-glass preparations of pus show pure cultures of staphylococci. Cultures made from deeper parts of thrombi show bacterium coli, no staphylococci. Both lungs show small areas of consolidation, but especially the left. On microscopic examination these areas have a bronchial distribution. Cultures from scrapings from the lung show bacterium coli, but no other organisms.

REVIEWS.

Essays and Addresses. By SIR JOHN RUSSELL REYNOLDS, Bart., F.R.S., M.D. Lond., LL.D. Aberd., LL.D. Edin., late President of the Royal College of Physicians of London, and of the British Medical Association; Physician to Her Majesty's Household; and Consulting Physician to University College Hospital. London: Macmillan & Co., Ltd. 1896.

SIR RUSSELL REYNOLDS has been well known for many years past as being amongst those who take their places in the front rank of the medical profession. As a student he had a brilliant career, and as hospital physician and as consultant his success was correspondingly great. This distinction has been recognised, not only in professional circles, but also in a much wider society, as may be judged by the honours bestowed —F.R.S., LL.D. Edin., LL.D. Aberd., President of the Royal College of Physicians, London; Physician to the Queen's Household.

Now that his life's work is done, and now that he has been given his place in the temple of fame, it is of the greatest interest to have collected together these essays and addresses, so that in them we may study his attitude of mind, not only to things professional, but also to the philosophy of life in general.

From this point of view, the essays and addresses may be divided into two groups. The first would include the more serious or technical, those dealing with medicine as a science; those in the second group have reference to medicine more as a career, or they consider it in regard to its human aspects.

In the first group we must mention the lecture delivered in 1859 on "The Facts and Laws of Life." It is a wonderfully clear and logical statement of the author's attitude to the "methods" of science. In a sense it might be called a vindication of the commonsense philosophy as opposed to positivism. He says (p. 73), "In thus surveying the aim which, as students of the medical profession, is placed before you, I have shown that the subject-matter of your study, LIFE, is two-fold—mind and body; material and immaterial; temporal, tangible and seen; unseen, intangible and eternal; and, further, that the gulf between these two is such that no science has yet bridged it over. . . . I have urged upon you, that although you may not know—may never know—the essence of life, yet that you may learn FACTS about it; . . . by using these facts . . . as your alphabet, you advance to the study of LAW; and that in it you find the suggestion of something beyond the mere facts themselves—the conception and revelation of a higher power, and of a plan which gives harmony and meaning to the diverse phenomena you witness. . . . Thus, your aim is to learn the truths and facts of a two-fold life, and to find in its deepest laws the revelation of that which is greater than itself."

The same ideas, though differently dealt with, are found in part in the oration "On the Relation of Practical Medicine to Philosophical Method and Popular Opinion."

Turning to "The Definition and Nomenclature of Disease," we get medicine considered from quite another aspect. This is the introduction to Reynolds' *System of Medicine.* It was written thirty years ago, and although reading it now for the first time, it may seem commonplace—and this is the more marked on contrasting it with Dr. Allbutt's introduction to the new *System of Medicine*—we must remember that thought has changed much during these years. In its day it was a masterpiece of its kind.

Among the addresses of the second group we find "The Types of Students" and "Specialism in Medicine." These, somewhere else, have been characterised as humorous, but if that is so, the humour is of a very caustic character. We feel Sir Russell Reynolds was not at his best when he wrote "The Types of Students." He seems to lack appreciation and sympathy for all but the brothers Goodman, who, by the way, he has made so good as to be almost uninteresting. All specialists, too, are surely not charlatans. The author gets back again to his higher level in "Some Past Teachers of University College," and in the address delivered on distributing prizes at the College in 1890. The ideal in these is lofty, and much of them, one feels, comes from the heart, for it goes to the heart.

The address delivered before the Student's Christian Association gives us yet another view of this character. From it we judge Sir Russell Reynolds' sympathies to be with the dissenting type of mind. He is eager for compromise to save the old beliefs. He believes in the authority of the majority —rather an alarming doctrine when we consider the numerical strength of such religions as Mohammedanism!

The book, as a whole, then, gives us its author. It shows a mind of great power, with a keen insight into the very centre of things. The outlook is possibly not that of a poet, but it is that of a thoughtful, earnest, and high-minded physician.

Vita Medica: Chapters of Medical Life and Work. By Sir Benjamin Ward Richardson, M.D., LL.D., F.R.S. London, New York, and Bombay: Longmans, Green & Co. 1897.

This work was finished by its gifted author two hours before the onset of his last illness. Two and a half days later—Saturday, 21st November, 1896—his busy useful life and brilliant career were at an end.

The book is autobiographical throughout, and as it deals largely with the writer's scientific and public work, it necessarily savours of egotism. Nowhere, however, is this such as to offend us, and, taking it all in all, we are greatly pleased that this book has been written, and written, too, by Richardson himself. We get here the facts as to the author's work, and are delivered from the undue laudations of a biographer and the speculations as to motive in which an outsider would indulge. The interest in the narrative is sustained almost from beginning to end. As a piece of literary art, of course, it cannot be put in the front rank. The irresistible charm of Hugh Miller in his autobiography—now, we fear, too little read—is quite lacking here. But no one who is attracted by the very numerous problems with which Richardson was engaged need find many pages of this volume dull.

Richardson's professional life began while the appenticeship system was in full swing, and he appears to have been particularly fortunate in his chiefs. He has nothing but good to say of this method of introduction to medicine—says it was the best that could be, and ought to have remained untouched. He was an experimenter from very early life, and if the patience necessary for his investigations was matched by anything, it was by the variety of subjects he took up. It is astonishing to read of the number of societies he founded or helped to found, the societies and meetings he presided over, the journals he started or edited or supported, the papers he wrote, the lectures he delivered. He introduced the ether spray apparatus for local anæsthesia; he introduced fourteen general anæsthetics, including bichloride of methylene and methylic ether; he gave the name "septine" to a crystalline substance which he separated from septic fluid drawn from the abdominal cavity; he discovered the property possessed by peroxide of hydrogen of giving to epidermal appendages a golden hue; he discovered and named ozonic ether; he introduced colloids as therapeutic agents (styptic colloid being the first); he introduced the ethylates or caustic alcohols for remedial purposes; he invented and named the lethal chamber; and, finally, to mention only one other instance, he effected such great improvements in the art of embalming dead bodies that at last he could carry out the process to perfection by needle injection alone. He did splendid work in connection with sanitation, and in connection with the abbatoirs and bakehouses of the Metropolis. He was not, strictly speaking, a vegetarian, but he hoped and confidently expected that we shall be able ultimately to prepare from vegetable sources foods which are animal in taste and quality, so that the slaughtering of animals for food will become unnecessary.

Richardson's position with regard to alcohol is well known, and was adopted at first from physiological considerations. He had been brought up, like his contemporaries, to look upon alcohol as a good friend of mankind; and while moral arguments in favour of abstinence appeared to him on examination to be sound, it was experimental results, confirmed time after time, and surprising to himself, that first stirred him to declare that alcohol is not only unnecessary for life, but is actually inimical to life. Richardson suffered severely for his new creed in the early days of the battle with alcohol, and the complete revolution that has taken place in public sentiment on the subject is well described in this work. Another revolution witnessed by our author was in the matter of treatment by blood-letting. He had the curious fortune to be the means of stopping two trials for malpractice, the ground of offence being in the one case that the doctor had refused to draw blood, and in the other that blood had been improperly abstracted.

Richardson was all along an enthusiastic supporter of the bicycle. Cycling, he says, has advanced the sanitation of this country a hundred years. He claims for the machine an English origin, though he admits the very great improvement which the French made by inventing the pedal movement. In the first year of the present reign, Richardson saw at Leicester a velocipede which was constructed entirely of wood by two brothers, who rode it together and worked it on the principle of the lathe. The old hobby-horse was propelled by the foot. The modern small wheels were introduced by Mr. John Browning.

The little inaccuracies of style which occasionally obtrude themselves in this volume might possibly have disappeared if the author had been spared to complete the revision of his proofs, but one or two errors of a different kind should be noticed. The name of the famous Scottish anatomist was not John Knox, but Robert Knox; his biography by Henry Lonsdale lies beside us as we write. The name Risdon Bennett is wrongly spelt on pp. 418 and 419. We are told that the sphygmograph was devised by Professor Meyer (p. 420); the instrument was invented by Marey. It is stated (p. 452) that "the ophthalmoscope was the invention of a considerable number of observers, and it is difficult to name any particular originator;" we always thought that Helmholtz had an undisputed claim to priority. Czermak is a more familiar spelling than Schermak of a well-known name (p. 453).

This interesting and beautifully printed volume is appropriately dedicated to the student of the future who may wish to take a glance at the Victorian era.

Schedules for Plant Description. By JOHN WISHART.
Edinburgh: E. & S. Livingstone. 1897.

THIS is a note-book in which a student may record in tabular form some of his observations on plants. Only one kind of schedule is given, and it is not adapted for plants other than phanerogams, a fact that ought to have been indicated in the title.

As the paper is sufficiently good and the printing neat, the book may be introduced by those teachers who do not prefer to print forms of their own and who see no objections to the scheme here given; but fault may well be found with an arrangement which, for example, introduces cross division by devoting co-ordinate sections to perianth, calyx, and corolla.

As a model, one of the schedules has been filled in with a description of the wallflower, but there are numerous errors of omission and commission. The drawing of the vertical section of the flower is bad and misleading. In a fashion that has become too prevalent, the *replum* is—twice—confused with the septum. The floral formula that is given itself affords a crop of mistakes:—

$$\mathrm{S}\,2+2,\quad \mathrm{P}\,4,\quad \mathrm{A}\,(2+2)+(2),\quad \mathrm{Gr}\,\underline{(2)}$$

No mention is made of the nectaries! Messrs. Livingstone would do well to cut out the model schedule and replace it, in the next edition, by one in which a higher standard of accuracy is set up for the student.

Transactions of the Obstetrical Society of London.

Vol. XXXVIII. Part IV.

Several important contributions appear in this part of the *Transactions* of the London Obstetrical Society. We mention some of these.

Dr. Lewers gives a very full report of "A Case of Double Uterus with Double Hæmatometra and Complete Absence of the Vagina." With considerable difficulty a vagina was found by careful dissection, and both distended uterine cavities evacuated. Dr. Stevens in an exhaustive manner describes "A Case of Completely Cleft Spine associated with an Unusual Visceral Malformation in an Anencephalic Fœtus."

Dr. Eden, in his paper, "The Structure of the Ripe Placenta, and the Changes which occur in Placentæ retained *in utero* after the Death of the Fœtus," refers chiefly to the alterations that occur in the intervillous spaces and later in the villi themselves when portions of placenta are retained for some time *in utero*.

Dr. H. R. Spencer reports "Three Cases of Porro's Operation, with Intraperitoneal Treatment of the Stump." In each case delivery *per vias naturales* was impossible. In Case I it was prevented by large fibroid tumours of the uterus, in Case II by a large enchondroma growing from the sacrum, and in Case III by atresia of the cervix occurring some time after removal of the portio vaginalis. The paper is an interesting one, but by some curious mistake the "stumps" are described as having been "intraperitoneally" treated, instead of "extraperitoneally," as was the case.

The reports of many other interesting cases and discussions are contained in the volume.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

SURGERY.

By GRANT ANDREW, M.B., C.M.

The Immediate Reduction of the Deformity in Pott's Disease.—In the *Gaz. Médicale de Paris*, 12th June, 1897, there is abstracted from the *Presse Médicale* an address by M. Ch. Monod reviewing three communications by Calot, Chipault, and Ménard respectively on this subject.

In France, and more particularly in Paris, there is at present quite a furore of excitement owing to the circulation of a report that hunchbacks need not now despair, and should go at once and be made straight.

What is Calot's method, and how is it regarded in France? Monod in his paper answers these questions. First, in regard to the method. To quote as nearly as possible Calot's own words—"Four strong assistants harnessed two by two to the two extremities of the patient pull in opposite directions, while the surgeon, his hands on the *gibbosité*, exercises on this point an extremely vigorous pressure (pressing as hard as he is able) until the displaced vertebræ have reached, or even got below, the level of the neighbouring vertebræ."

Calot usually removes the "knotty projecting apophyses," and also the segment of skin covering them, before straightening the column. If the deformity be old, a cuneiform resection is advised; but this has only been practised "twice or thrice."

After the straightening the patient is enclosed in a plaster jacket, changed two or three times during the first four months, at the end of which time he is authorised to walk with a "corset." The correction of the deformity lasts for five or six months. Up till December last Calot had practised thirty-seven times the reduction of deformity due to Pott's disease, "with no accident." The cord in particular never seemed to suffer; in fact, in one case an existing paralysis seemed to lessen after the operation. In two cases only distant abscesses (in iliac fossa and in buttock) showed themselves four to six months afterwards. These abscesses were treated and "cured in the ordinary way." In three cases where an abscess existed at time of operation the collection got absorbed and disappeared spontaneously. As Monod remarks, these results are almost too good, and little in keeping with what is known of bony tuberculosis in general and Pott's disease in particular. Calot does not deny this, and says "that without doubt he has fallen on a happy series."

Six only of the thirty-seven cases were exhibited, and of these two were wearing a support; the remaining four were shown straightened, and free of all apparatus.

Chipault, after straightening the deformity, fixes the "knotty apophyses" by silver wire (figure of 8), and reports five cases with good result. The patient is fixed for a time on a "board" instead of being up in plaster immediately subsequent to operation.

Ménard, in a quite recent communication (11th May, 1897) to the Academy, absolutely condemns the operation, and considers it dangerous and inefficient. He has experimented on the dead body and examined museum specimens, and come to the following conclusions:—

1. That, notwithstanding the dislocation produced by the "straightening," it is quite true that the cord and membranes remain intact.

2. That the forced straightening necessarily opens up the two segments of the diseased bony column, and consequently forms a large gap which measures, according to Ménard, 2, 4, or 6 centimetres, or more.

3. To make a perfect recovery this gap should get filled up with solid bony callus; and should this callus not form, the cicatrix is only fibrous and retractile.

4. That this latter is what happens is ascertained from *post-mortem* and museum examinations; that the periosteum of the vertebræ is profoundly altered or destroyed, and does not produce new bony tissue at any period in the evolution of the disease.

From these various communications Monod sums up thus:—That in recent cases, and where the deformity is not great, the operation holds out a certain prospect of success; but in cases of long standing, and where several vertebræ are involved, the gap produced after straightening is too great to be followed by other than fibrous tissue, so that there is great risk of the deformity returning when the support is removed.

In the *Lancet*, 7th August, 1897, Jones and Tubby are reported as having demonstrated in the Royal Southern Hospital, Liverpool, on a series of cases the manipulations for immediate reduction of deformity. The children's ages varied from 3 to 8 years, and some of the curvatures were extreme. The deformities were reduced with considerable facility. . . . An exact estimate of the value of the treatment is impossible at present.

Cerebral Localisation.—Stoddart (*Clinical Journal*, July, 1897) reviews seriatim the various symptoms of intracranial lesions, and explains their significance. The value of the summary, it is hoped, will compensate for the length of the abstract.

1. *Mental Symptoms.*—Practically of little localising value. Roughly, disease of the frontal lobes causes loss of memory and moral deterioration, while disease of posterior third of the hemispheres is liable to cause mental symptoms not unlike general paralysis.

2. (*a*) *Persistent Headache.*—Situation of headache is of little localising value. Intense frontal headache may be due to cerebellar tumour, and generally on opposite side. In headache at nape of neck tumour is probably sub-tentorial.

(*b*) *Cephalic Tenderness.*—If tenderness only on firm pressure or percussion, the tumour is in membranes and somewhere near tender spot. If tenderness is superficial the tumour is in brain substance; cerebral tumours cause tenderness of scalp, cerebellar tumours tenderness of face.

3. *Fits.*—Fits of an epileptiform or Jacksonian type are of utmost value in determining situation of lesion. Ordinary epileptic fits begin usually with loss of consciousness; epileptiform never, but often with some local subjective phenomenon, such as (*a*) seeing complicated pictures (angular gyrus), (*b*) ringing of bells (superior temporo-sphenoidal), (*c*) metallic taste (hippocampus major). If with movement, then different cortical centres round fissure of Rolando.

4. *Cranial Nerves.*—(1) Loss of sense of smell usually due to pressure on olfactory tracts—*e.g.*, tumour in frontal lobes; said, also, to be lost in some cases of cerebellar disease.

(2) *a.* Optic neuritis, localising value small. Most intense where tumour is in cerebellum or occipital lobes.

b. Complete blindness, due to intracranial mischief (apart from optic neuritis and atrophy); due to a lesion either at optic chiasma or splenium of corpus callosum.

c. Hemianopia is due to lesion somewhere between optic chiasma and occipital lobe of one side, or in either of these two places. Hemianopia due to lesion of optic radiations is associated with hemianæsthesia, while that due to lesion in occipital lobes is not. A tumour near to external geniculate body may be diagnosed if hemianopia is associated with ophthalmoplegia of opposite side (pressure on crus). Lesions of chiasma cause irregular forms of hemianopia.

(3) A lesion of third nerve causes paralysis of levator palpebræ and internal, superior, and inferior recti, as well as inferior oblique (ptosis, divergent strabismus, inability to turn eye upward, downward, or inward, diplopia), and also of sphincter iridis and ciliary muscle (dilated pupil, palsy of accommodation).

Diagnosis between lesion of trunk of nerve and lesion of nucleus. The inner or palpebral fibres of orbicularis palpebrarum are supplied by nerve fibres which arise in nucleus of third and emerge with fibres of facial; hence a lesion of nucleus causes diminished power of closing eyes naturally.

Fourth.—Diplopia homonymous.

Sixth.—Paralysis of external rectus (convergent squint). Diagnosis between lesion of trunk and of nucleus. A lesion of sixth nucleus in pons causes not only weakness in external rectus of same side, but weakness of internal rectus of opposite side (proximity of third and sixth fibres in posterior longitudinal bundle), *i.e.*, impaired power of looking to same side. Both nuclei often involved, then patient only able to look upwards and downwards, but not to either side.

Fifth Nerve.—On motor side paresis of muscles of mastication, and on sensory side loss of sensation of face and scalp in front of coronal line joining two ears. Anæsthesia of nasal cavities and of mouth as far back as tonsils and soft palate, and loss of taste for front of tongue. If the mouth be opened widely, jaw deviates to paralysed side.

Seventh Nerve.—Paralysis of facial trunk causes inability to raise forehead on same side, inability to frown on that side, to close eye, or raise upper lip. Paralysis of facial due to cerebral lesion is limited to lower part of face, and only noticeable in inequality of naso-labial folds. The facial is accompanied by some fibres from hypoglossal nucleus to supply orbicularis oris, hence, if lesion is limited to cells of facial nucleus, inner fibres of orbicularis oris would not be paralysed, and patient could whistle.

Eighth Nerve.—The question as to whether lesion is in auditory centre, nerve or nucleus, is decided by other associated conditions.

Ninth Nerve.—Glosso-pharyngeal supplies sensation of pharynx and back of tongue. If both involved, feeding tube must be used.

Twelfth Nerve.—The tongue may be paralysed on one side from involvement of tongue centre or hypoglossal nucleus or nerve. In any case, when protruded it deviates to paralysed side. If the palsy be cerebral, there is no wasting.

5. Absolute *hemianæsthesia* almost certainly means involvement of posterior end of internal capsule, and diagnosis is absolutely certain if associated with hemianopia.

6. *Knee-jerks.*—Stoddart gives the following clinical rule, by no means constant:—That the knee-jerk is diminished or lost in irritative lesions of the cerebrum and paralytic lesions of the cerebellum, and it is increased in paralytic lesions of the cerebrum and irritative lesions of the cerebellum.

7. *Anæsthesia* due to disease of cortex is but slight. Lesions in cortical area of parietal lobe give rise to loss of sense of position. Test sense of position immediately after an epileptiform attack; if sense of position improves after an hour or so, lesion is either subcortical or supracortical; if not, it is cortical.

Corpus Callosum.—Suspect a lesion of corpus callosum if unilateral fits are associated with hemiplegia of opposite side.

Lenticular Nucleus.—Lesions here may cause rise of temperature.

Optic Thalamus.—Mobile spasm of one side with hemiplegia of opposite side.

Corpora Quadrigemina.—Ophthalmoplegia and staggering gait with increased knee-jerks.

Crus Cerebri.—Third nerve, paralysis of one side with hemiplegia of other side.

Pons.—Paralysis of fifth, sixth, seventh, and eighth nerves of one side with hemiplegia of other.

Medulla.—Paralysis of ninth, tenth, eleventh, and twelfth nerves of one side with hemiplegia of other.

Cerebellum.—Lesion of anterior part of middle lobe causes patient to fall forward, while one in posterior part causes patient to fall backward; nystagmus, rotatory or oblique, more marked on same side as lesion; weakness of back muscles. If in lateral lobe, tendency to rotate to side of lesion; if in superior peduncle, most marked in head and trunk; if in middle peduncle, more marked in trunk; if in inferior peduncle, rigid extension of the limbs of same side with flexion of opposite side; knee-jerk usually diminished on side of lesion.

Resection of the Gasserian Ganglion.—In a lengthy and able article in the *Revue de Chirurgie*, April, 1897, Marchant and Herbet deal with those intractable neuralgias of the fifth nerve which necessitate removal of the Gasserian ganglion. The pathological condition of the ganglion is first discussed, and Sanger, of Hamburg, is quoted as having found considerable alteration of structure—atrophy of ganglionic cells, diminution in their number, alteration in their form and colour, with sometimes amyloid degeneration and hyperplasia of interstitial connective tissue. Similar observations have been noted by d'Antona, Dana, Horsley, &c.

Before undertaking such a serious operation, the authors advise, of course, a thorough trial of less severe measures, and the exclusion of a cause not likely to be benefited by operation.

The following are briefly the conclusions drawn:—

1. That of the three different ways of reaching the ganglion, the temporo-sphenoidal (Doyen) is the most effectual, as the exposure of the inferior maxillary nerve in the foramen ovale leads the operator to the object of attack.
2. That the ganglion can be and should be completely destroyed.
3. That in most recorded cases the ganglion was incompletely crushed or scraped.
4. That the immediate dangers of operation are (*a*) hæmorrhage from soft parts, from middle meningeal artery, from vessels of dura mater, from cavernous sinus; (*b*) injury to nerves—oculo-motor, great petrosal; (*c*) cerebral compression.
5. That the secondary complications are from compression, iodoform intoxication, septic infection, and ocular troubles.
6. That the absence of sensibility over the region supplied by branches of the fifth does not long persist, and that the damage to the organs of special sense varies.
7. That recurrence is more frequent after resection of the nerves than after complete extirpation of the ganglion.
8. That up to the present, complete extirpation has not been superior to simple destruction of the ganglion.
9. That the mortality has been 17 deaths out of 95 operations—66 operations by temporal method, 11 deaths (12 per cent); 29 operations by pterygoid method, 6 deaths (60 per cent); 15 cases of complete extirpation, 5 deaths (13 per cent); 60 cases of incomplete extirpation, 8 deaths (33 per cent); 15 cases of simple resection of branches, 1 death (66 per cent).

The Trendelenburg Posture.—Keen, of Philadelphia (*Annals of Surgery*, July, 1897), advises the Trendelenburg posture during all operations involving directly or indirectly the cavities of the mouth, nose, and trachea, and reports two cases, one of removal of epithelioma and the other of sarcoma of the tonsil, in illustration.

The patient is placed at an angle of 35 to 45 degrees, arrangements being made by means of a shoulder brace to prevent slipping. The advantages of this position are summarised as follows:—

1. There is little danger of an aspiration pneumonia following the operation.
2. A preliminary tracheotomy is avoided—no slight advantage, as a tracheotomy wound is always necessarily an infected wound, and adds, therefore, greatly to the danger of the principal wound.
3. There is little difficulty in giving the anæsthetic. An ordinary Allis inhaler is used until the patient is deeply anæsthetised, when the inhaler is laid aside and chloroform given by means of a good sized pledget of cotton held in ring forceps.
4. The mouth being gagged open, if the operation is intra-oral, the interior of the cavity is very readily seen, especially if the gag, as in Dr. Mear's mouth-gag, holds a tongue-depressor.
5. There is no spluttering of blood into the face of the operator, and therefore no interruption to the operation.

DISEASES OF THE EYE.

By FREELAND FERGUS, M.D.

Aphakic Eyes and Appropriate Correcting Glasses. By Percival (*Knapp's Archives*, 1897).—Starting with the formula applicable to the reduced eye,

$$(p - f_1)(g - f_2) = f_1 f_2,$$

p = distance of punctum remotum from cornea, is therefore positive or negative; g = antero-posterior diameter of the eye, is always negative.

$$p - f_1 = \frac{f_1 f_2}{g - f_2} \text{ where } g - f_2 = \text{excess or defect of eye in millimetres.}$$

Also, $p - f_1$ denotes the glass placed at the anterior focus of the eye, which will correct the ametropia. $f_1 f_2$ in Donders' reduced eye = 300.

$$\frac{f_1 f_2}{g - f_2} = \frac{(15)(-20)}{-(g - f_2)} = \frac{300}{l} \text{ when } l = (g - f_2).$$

Suppose eye 3 millimetres too long, then $l = +3$,

$$\therefore \quad (p - f_1) = \frac{300}{3} = 100 \text{ mm.}$$

Therefore a − 10 D lens placed at the anterior principal focus will correct this eye for distance.

Again, the correcting lens can be expressed by $\frac{1000}{x}$ where x = number of dioptres, and 1000 = number of millimetres in a metre.

$$\therefore \quad \frac{1000}{-x} = p_1 - f_1 = \frac{300}{l}$$

$$\therefore \quad \frac{1000}{-x} = \frac{300}{l} \quad \therefore \quad 1000\,l = -300\,x; \quad x = \frac{-l}{\cdot 3} \quad \therefore \quad l = -\cdot 3\,x.$$

In the aphakic eye.

If r is normal = 7·829 mm., $f_2 = 31{\cdot}095$, $f_1 = 23{\cdot}266$

$$p - f_1 = \frac{f_1 f_2}{-(g - f_2)} = \frac{f_1 f_2}{l} = 723{\cdot}455.$$

Thus 31·095 mm. = the length of the emmetropic aphakic eye.

Moreover, $(p - f_1)$ denotes glass placed at anterior focus to correct any excess or defect of refraction.

$$\text{Then}\quad \frac{1000}{-x} = p - f_1 = \frac{723\cdot455}{l}$$

$$\therefore\quad l = -\cdot723455\,X \text{ and } X = \frac{l^1}{\cdot723455} = -1\cdot38226\,l^1.$$

If an emmetropic eye, length 22·8237 mm., is made aphakic, the $(g - f_2) = l^1 = 22\cdot8237 - 31\cdot095 = -8\cdot2713$ mm.

$$X = (-1\cdot38226)(-8\cdot2713) = +11\cdot5\,D.$$

That, then, would correct an emmetropic eye deprived of its lens if the correcting glass were placed at 23·2 mm. in front of the cornea.

The Ophthalmometer as a Guide in Subjective Optometry. By D. Bull, Paris.—Starting with the fact that there are four refracting surfaces—viz., the anterior surface of the cornea, the posterior surface of the cornea; the anterior surface of the lens, the posterior surface of the lens—it can be proved that astigmatism may exist in any one of them. The whole defect may thus be divided into an astigmatism due to the external surface of the cornea, and an astigmatism due to the other three surfaces. The intra-ocular astigmatism can be examined by Tscherning's ophthalmophacometer.

In the eyes examined by Tscherning, the resultant astigmatism has always been inverse. Bull believes that this, generally speaking, is the case. He also says that his experience leads him to believe that the corneal meridian of greatest curvature is not also the meridian of greatest refraction.

The instruments and calculations required to investigate these problems are too complicated for the consulting room; but Bull has arrived at the following practical rules:—

1. When the corneal astigmatism is direct, and above 1 D, we may expect the total astigmatism to be also direct, but of lesser amount.
2. When the corneal astigmatism is direct, and about 0·75 D, we may expect to find an almost total absence of astigmatism by subjective examination.
3. When the corneal astigmatism is direct, and 0·25 D, subjective examination will probably reveal an inverse astigmatism of about 0·50 D.
4. When there is no corneal astigmatism, we may expect to find by subjective examination an inverse astigmatism of about 0·75 D.
5. When the corneal astigmatism is inverse, we shall generally find by subjective examination a higher amount of inverse astigmatism.
6. When the corneal astigmatism is oblique, and direct rather than inverse, a lower degree of astigmatism will be discovered by subjective examination. The reverse of this is true when the obliquity tends to bring the case into the class of inverse astigmatism.
7. When the corneal astigmatism is oblique and of low degree, the meridian of greatest refraction of the whole eye commonly inclines more towards the horizontal than does the meridian of greatest corneal curvature.
8. When the corneal astigmatism is of high degree, the meridian of greatest corneal curvature coincides with the meridian of greatest refraction of the eye.

To measure astigmatism is to measure what Bull calls the "remote zone" of the range of accommodation. To do this he brings, in all cases, the meridian of least refraction to the test-card exactly, and then with concave cylindrical lenses he brings the zone of greatest refraction up to it.

Bilateral Extirpation of Cervical Sympathetic for Exophthalmic Goitre.—This is a method of procedure advocated by Jonnesco, of Bucharest, in *Annales d'Oculistique*. Notwithstanding the statements contained in physiological manuals, resection of the sympthetic, or even extirpation of the ganglia, does not seem to produce very serious results.

Operations of this kind have lately been devised—(1) For the cure of exophthalmic goitre; (2) for the treatment of certain forms of epilepsy. The results obtained in the treatment of goitre seem remarkably good. The swelling has diminished in a surprising manner, the rate of the pulse has been reduced to the normal, and the visual acuteness has greatly improved. The cases quoted certainly merit the attention of practitioners.

As regards the treatment of epilepsy, it is not yet possible to speak with any degree of confidence.

Books, Pamphlets, &c., Received.

A Manual of Practical Medical Electricity, by Dawson Turner, B.A., M.D., F.R.C.P. Ed., M.R.C.P. Lond. Second Edition. With chapters on Röntgen Rays. London: Baillière, Tindall & Cox. 1897. (7s. 6d.)

A Handbook of Diseases of the Nose and Pharynx, by James B. Ball, M.D. Lond. Third Edition. London: Baillière, Tindall & Cox. 1897. (7s. 6d.)

The Practitioner: a Journal of Practical Medicine and Surgery, edited by Malcolm Morris. New Series. Vol. V. London, Paris, and Melbourne: Cassell & Co., Ltd. 1897.

Diseases of the Gall-bladder and Bile-ducts, by A. W. Mayo Robson, F.R.C.S. London: Baillière, Tindall & Cox. 1897. (7s. 6d.)

Wounds in War: the Mechanism of their Production and their Treatment, by Surgeon-Colonel W. F. Stevenson, A.B., M.B., M.Ch. Dublin. London, New York, and Bombay: Longmans, Green & Co. 1897. (18s.)

Westminster Hospital Medical School Calendar for 1897-98.

The Eye as an Aid in General Diagnosis, by E. H. Linnell, M.D. Philadelphia: The Edwards & Docker Co. 1897.

King's College Hospital Reports. Vol. III. London, 1897. (7s. 6d.)

Recherches Cliniques et Thérapeutiques sur l'Epilepsie, l'Hystérie, et l'Idiotie, par Bourneville. Vol. XVII. Paris. 1897. (6 fr.)

Elements of the Comparative Anatomy of Vertebrates. Adapted from the German of Dr. Robert Wiedersheim, by W. N. Parker, Ph.D. Second Edition. London: Macmillan & Co., Ltd. 1897. (12s. 6d. net.)

Our Baby, for Mothers and Nurses, by Mrs. Langton Hewer. Fifth Edition. Bristol: John Wright & Co. 1897. (1s. 6d.)

Practical Muscle Testing and the Treatment of Muscular Atrophies, by W. S. Hedley, M.D. London: H. K. Lewis. 1897. (3s. 6d.)

Report on Vital and Social Statistics in the United States at the Eleventh Census (1890), by John S. Billings, M.D. Parts II, III, IV. Washington: Government Printing Office.

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 21st AUGUST, 1897.

	Week ending			
	July 31.	Aug. 7.	Aug. 14.	Aug. 21.
Mean temperature, . .	61·7°	66·4°	59·5°	58·4°
Mean range of temperature between day and night, .	13·5°	19·7°	19·7°	14·5°
Number of days on which rain fell, ...	3	3	5	6
Amount of rainfall, . ins.	0·66	0·30	3·63	2·29
Deaths registered, . . .	256	290	311	320
Death-rates, ...	18·6	21·1	22·6	23·3
Zymotic death-rates, . .	3·4	6·0	6·8	8·2
Pulmonary death-rates, .	3·1	3·5	3·1	4·1
Deaths—				
Under 1 year, . . .	81	106	144	123
60 years and upwards, .	43	38	38	37
Deaths from—				
Small-pox, ...	...	...	...	...
Measles, ...	1	3	1	1
Scarlet fever, . . .	...	2	1	4
Diphtheria, . . .	2	...	1	...
Whooping-cough, . .	14	13	9	16
Fever, ...	1	...	2	3
Diarrhœa, ...	29	65	79	89
Croup and laryngitis, .	...	...	1	...
Bronchitis, pneumonia, and pleurisy, . . .	24	25	22	29
Cases reported—				
Small-pox, ...	5	12	3	2
Diphtheria and membranous croup, ...	3	1	7	8
Erysipelas, . . .	11	16	18	14
Scarlet fever, . . .	45	40	34	48
Typhus fever, . . .	...	...	...	...
Enteric fever, . . .	13	10	16	38
Continued fever, . .	1	...	...	...
Puerperal fever, . .	1	1	...	...
Measles,* . . .	22	36	18	18

* Measles is not notifiable.

Sanitary Department,
Glasgow, *25th August, 1897.*

THE

GLASGOW MEDICAL JOURNAL.

No. IV. October, 1897.

ORIGINAL ARTICLES.

LECTURES ON CLINICAL MEDICINE.

DELIVERED IN THE GLASGOW ROYAL INFIRMARY.

By JOHN LINDSAY STEVEN, M.D.,
Physician and Lecturer on Clinical Medicine in the Infirmary.

VIII.

A CASE OF THE SO-CALLED HYPERTROPHIC PULMONARY OSTEO-ARTHROPATHY OF MARIE, WITHOUT PULMONARY DISEASE.[1]

The case which I now desire to demonstrate presents, in my opinion, most of the clinical features of the affection which Marie has designated hypertrophic pulmonary osteo-arthropathy. In this case, however, the term pulmonary might almost be omitted, for reasons which I will state after I have described the clinical characters.

The patient, a married man, aged 48, employed as a porter, was sent into my wards by my clinical assistant, Dr. Walter K. Hunter, on the 27th May, 1897, on account of progressive enlargement of the hands and feet, of about nine months' duration in all. On examination, a very striking alteration in the shape of the fingers, hands, wrists, and forearms is at once apparent. The fingers are thick, clubbed at the ends, with great incurvation of the nails, so that the free extremities of almost all the digits are covered by the bent nails and not by the skin. This is particularly the case in the thumbs, which present the "parrot's beak" appearance described by Marie (Fig. 1, p. 242). The enlarged extremities of the fingers

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[1] This lecture was read, and the various photographs, drawings, and diagrams illustrating it were shown at the meeting of the Section of Internal Medicine of the Twelfth International Medical Congress, at Moscow, on 25th August, 1897.

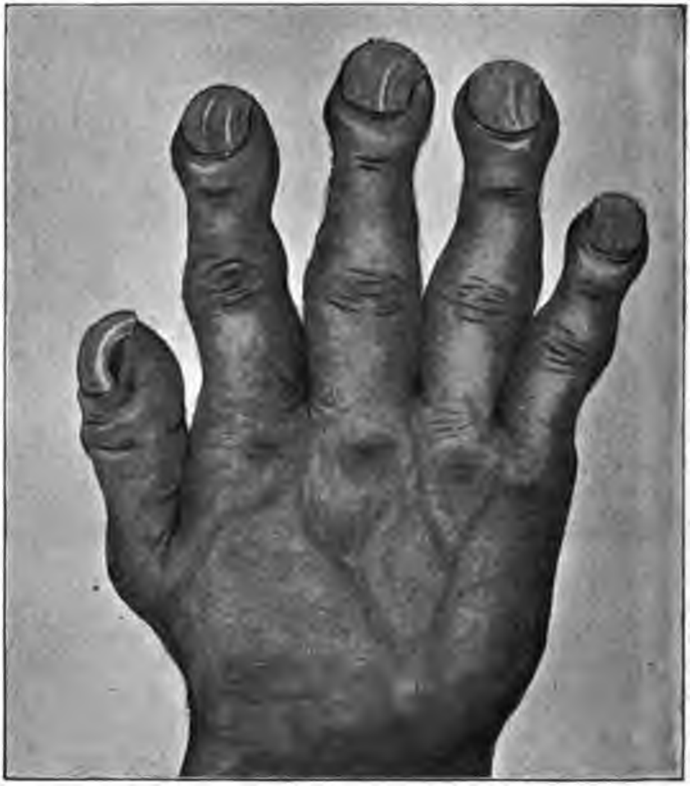

FIG. 1.

From a water-colour drawing of the right hand by Miss J. Effie Prowse, made immediately on admission. The curved condition of the nails, the bulbous finger ends, and the thickening of the proximal halves of the fingers are well shown. The superficial veins are also very prominent.

resemble slightly the bulbous finger ends of phthisis, chronic bronchitis, or cyanosis, but there is no wasting of the finger behind the bulbous point; indeed, the whole finger is thickened, particularly at the joints. The skin of the finger tips, though redder than that of the fingers generally, is not livid. The nails are not markedly striated, and are increased in length, but not greatly in breadth (Fig. 1, p. 242). The fingers are not obviously increased in length, and measurement shows that the middle finger is barely 4¼ inches in length from the

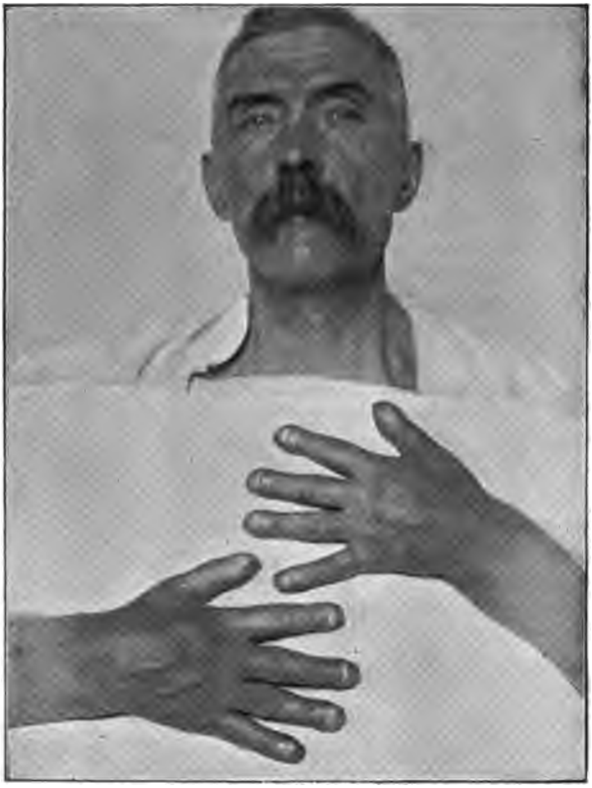

Fig. 2.

From a photograph by William Burns, M.B., after five or six weeks' residence. Shows the appearance of the face to be normal; the altered state of the hands; and the thickening of the lower portion of the forearm, particularly at the left wrist.

knuckle to the tip, a length which is not definitely greater than that of a normal hand. The whole hand has a thickened and hypertrophied appearance, the right being distinctly larger than the left. On admission, the circumference of the right hand at the metacarpo-phalangeal joints was 8¾ inches;

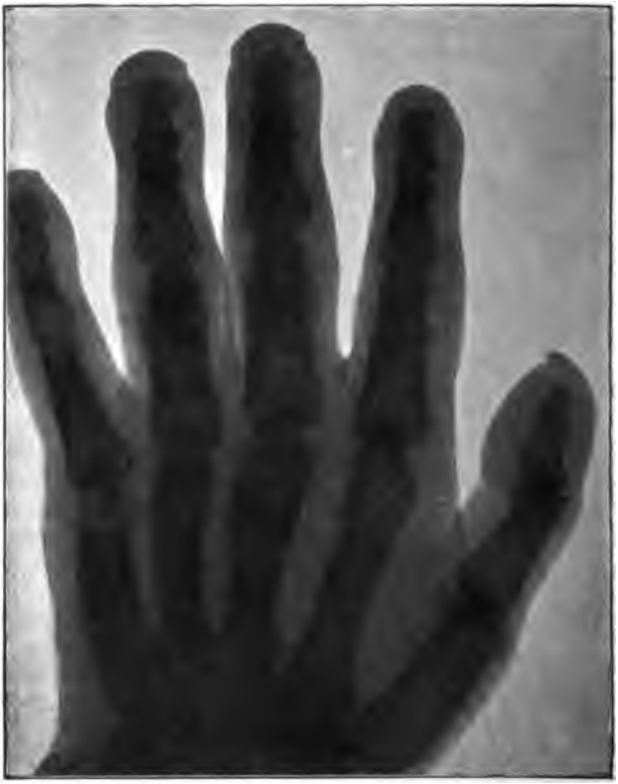

FIG. 3.

Skiagram of left hand by Dr. A. G. Faulds. Shows thickening of digits and metacarpal bones, due to subperiosteal new formation. This is particularly well seen in the bones of the middle, ring, and little fingers.

of the left, 8¼ inches (Fig. 2, p. 243). The circumference of the middle finger of the right hand at its second joint was 3¼ inches; of the left, 3 inches. On 5th July, 1897, the measurements were found to be the same. On account of stiffness and swelling of the fingers the right hand cannot be closed, the left only feebly. The metacarpal regions of the hands are, on the whole, less altered than the fingers and wrists, but a skiagram shows that in the metacarpal bones,

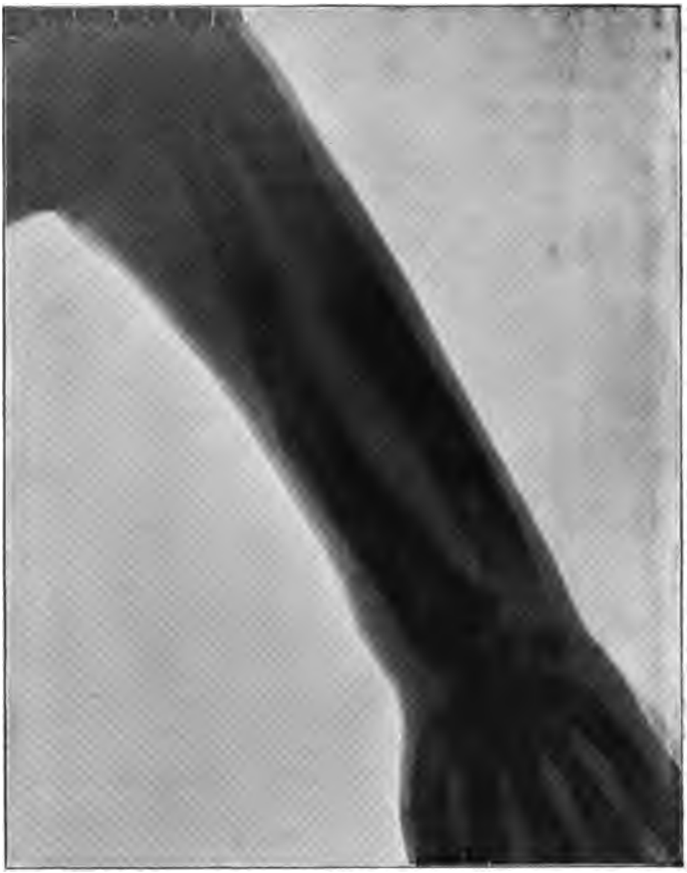

FIG. 4.

Skiagram of forearm by Dr George Macintyre. Shows subperiosteal thickening of distal three fourths of radius and ulna. There is also undue curving of the radius.

as well as in the phalanges, there is very distinct subperiosteal new formation of bone (Fig. 3, p. 244).

Hypertrophy of the distal extremities of the forearm bones imparts a striking appearance of enlargement to the wrist-joints, which, with slight narrowing of the carpal region, reminds one a little of the deformity of rickets. The surface of the thickened bones is felt to be rough, and this thickening and roughness can be traced quite up to the middle of the forearm, above which the bones again appear to be of normal size. The skiagram shows very marked subperiosteal formation on the radius and ulna, extending up the shafts for nearly three-fourths of their length (Fig. 4, p. 245). The wrist-joints are somewhat stiff, and the circumference of the right over the enlarged bones is 8½ inches; of the left, 8 inches.

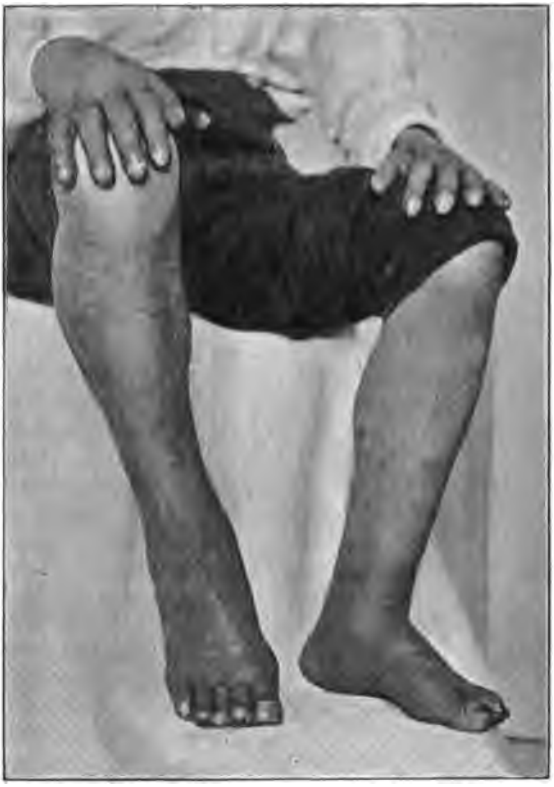

FIG. 5.

From a photograph by Dr. William Burns. Shows the hypertrophied appearance presented by the feet and ankles. The malleolar region is greatly thickened. The unnatural condition of the finger points is also well shown.

The form of the face presents nothing unusual, and in particular it is noted that there is no enlargement or deformity of the lower or upper jaw. The tongue is not enlarged. Sensibility to touch and pain in the upper extremities is normal, and the senses of taste, hearing, and smell seem to be quite normal. No retro-sternal dulness can be detected.

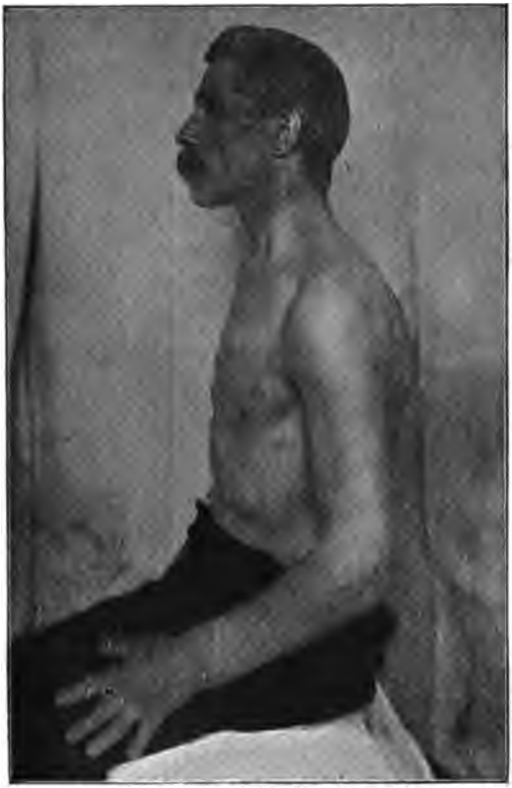

FIG. 6.

From a photograph by Dr. William Burns. Profile view of the trunk. There is perhaps a slight tendency to kyphosis in the middle dorsal region. The thickened appearance of the wrist is well seen.

On examining the lower extremities, a hypertrophic condition in all respects comparable to that in the hands and forearms is found in the feet and legs. The toes are distinctly bulbous; and there is great thickening of the lower ends of the leg bones, especially in the malleolar region (Fig. 5, p. 246). Pressure over the right malleoli causes very considerable pain. The circumference of the right ankle measures 11¼ inches; of the left, 11 inches; of the feet at the metatarso-phalangeal joints, 10 inches. The sense of touch and pain in the lower extremities is normal. Patellar tendon reflexes are perhaps slightly exaggerated, and there is a slight tendency to ankle clonus. In walking he has lately experienced a very considerable degree of stiffness and weakness in the knees and ankles, particularly the former, so that he is no longer able to carry heavy weights as before. He has also had much pain in the knee-joints, which are considerably swollen, and creak on being moved. He is a powerful man, and when he was well was able to carry a weight of 4 cwts.

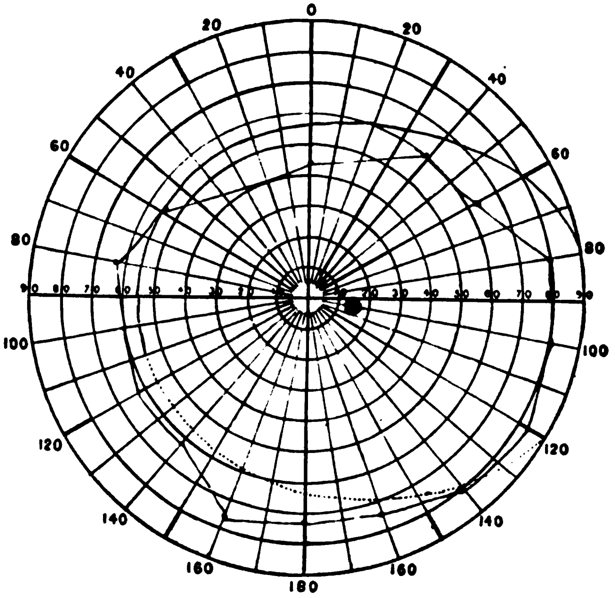

FIG. 7.

Perimetric tracing of right eye by Dr. T. K. Monro, 5th June, 1897; white light and bright day. Showing slight restriction of the temporal half field.

No deformity of the trunk or of the spinal column is noticeable (Fig. 6, p. 247). The cremasteric reflex is normally present. He has never had any trouble with his bladder.

His bowels are occasionally constipated, but during latter part of residence have been quite normal.

The urine has a normal amber colour, without deposit. The reaction is acid; the specific gravity, 1018; and no albumen, sugar, peptone, or blood has been detected. The daily average quantity of urine, however, has been all along very decidedly above the average. From 1st June to 29th July, 1897, the daily average quantity has been 76½ oz., and on eight days the amount reached 100 oz. or more.

The thyroid region presents nothing unusual. The lobes and the isthmus of the thyroid gland can be felt, but it cannot be said that there is either atrophy or hypertrophy of the organ.

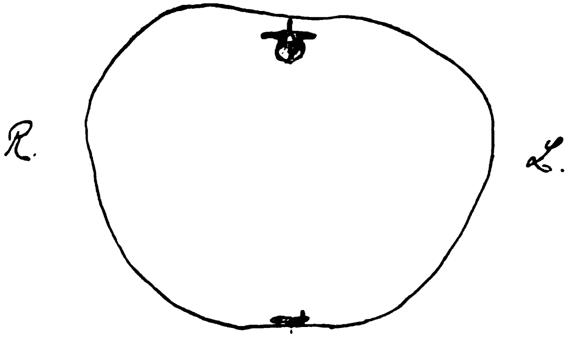

FIG. 8.

Cyrtometer tracing of chest about 1 inch above the level of the nipple. Shows slight inequality in favour of right side, but may be regarded as normal.

On inquiry, it is elicited that he began to experience some dimness of vision about the same time that the changes in the feet and hands were first observed—*i.e.*, about nine months before his admission. For a careful examination of the eyes I am indebted to my clinical assistant, Dr. T. K. Monro, who reports as follow:—"The pupils respond normally to light and in accommodation. With the right eye he counts fingers at 5, with the left at 4 metres. A rough test shows restriction of the temporal, but not of the nasal, half-fields. Perimetric tracings, likewise, show restriction of each field in its temporal half, whilst the nasal half is as good as the average, or even better, with white light (Fig. 7, p. 248).

"*Ophthalmoscopic Examination.*—The right disc has a certain woolliness of aspect all over, with an ill-defined margin, especially at the upper and lower parts, and to a less extent at the inner portion; it is relatively well-defined at the outer sides. Otherwise, the only noteworthy fact is slight fulness and tortuosity of the veins. The macular region and the fundus generally are normal. The left fundus presents, on the whole, similar appearances. Both discs are, if anything, somewhat hyperæmic, but they are not swollen."

The patient gives the following account of the affection which has just been described. About nine months before admission to the ward, having always previously been quite healthy and strong, he observed some enlargement of the hands and feet, unaccompanied by pain of any kind, but associated with dimness of vision, a symptom then experieneed for the first time. Three months later than this he began to experience pains in the fingers, particularly on attempting to bend them. On the whole, however, he paid little attention to the condition of his hands and feet till eight or nine weeks before entering the Infirmary, when he began to be troubled with severe pain in the ankles and knees, ultimately obliging him to give up work on account of his inability to carry weights or to go up and down stairs. He also suffered from pains in the wrists, particularly the right, and at times, also, in the shoulders. During his illness he has been much troubled with sweating of the feet, and in walking he feels as if a piece of cloth were interposed between the sole and the ground. He was inclined to think that the striking incurvation of the nails had been produced by pressure brought to bear on the points of the fingers while making up bales of goods at his work.

Four months before his admission he suffered from a severe cough, which, however, did not cause him to give up his work, and which had entirely disappeared about a month before he came into hospital. A minute and critical physical examination of the organs of the chest reveals absolutely no signs of disease. A cyrtometric tracing of the chest wall at the level of the fourth cartilage is characteristically normal (Fig. 8, p. 249). The lungs, especially, are found to be quite healthy, and he has had neither cough, spit, elevation of temperature, or any indication whatever of lung disease during the two months he has been under observation.

He suffers, however, from a chronic erythema of the face, with moderate desquamation, a condition which was present before his admission; and during residence he has also complained of flushings of the face. His chief trouble has been caused, while under observation, by pains in the knee-joints, worst when he is going about, and especially on going down stairs. There is no unmistakeable kyphosis; and no intellectual defect.

An examination of the blood shows rather more than the average number of blood corpuscles, and the hæmoglobin is about 80 per cent.

Family History.—There is absolutely no rheumatism, acute or chronic, in the members of his family. His father died at the age of 63, and his mother at 72. Of thirteen children born to them, eight attained adult life.

The case thus briefly described and fairly well illustrated by the photographs and skiagrams is certainly an unusual one. As to its essential nature no very definite or precise statements can be made. I have seen no similar case before, but there are three well recognised morbid conditions to which it may be supposed to bear certain relationships. These are—(1) acromegaly of Marie; (2) osteitis deformans of Paget; and (3) hypertrophic pulmonary osteo-arthropathy of Marie.

The only features of the case which seem to bear any resemblance to acromegaly are the slight defect of the temporal half of the field of vision and the excessive average daily quantity of urine. None of the other phenomena of acromegaly seem to be present, and in particular the hypertrophy of the soft tissues met with in the deformed hands of acromegaly is absent.

The outstanding features of Paget's osteitis deformans are likewise not present in this case. There is no deformity of the skull, no pronounced curving or lengthening of the long bones, no deformity of the chest, and, so far as can be made out, no tendency to softening of the bones; indeed, the striking physiognomy of a well-marked case of osteitis deformans are entirely absent, although, of course, the progress of our case may not yet be sufficiently advanced for this. The lesion of the affected bones, however, as revealed by the Röntgen rays, is, on the whole, such as is described in Paget's disease, and there is perhaps slightly undue curving of the forearm bones; but the distribution of the lesion seems to be entirely different.

On the whole, I think the case may be taken as corresponding most closely to Pierre Marie's account of what he has designated hypertrophic pulmonary osteo-arthropathy. In all essential particulars, save one now to be mentioned, it conforms to the account of the deformity to which Marie has given this somewhat cumbrous name. The point of difference is that, in this man's case, there is, and has been, no chronic pulmonary or pleural affection. We are, therefore, unable, to explain the subperiosteal osseous growth causing the deformity described as the result of the absorption of poisonous toxines from diseased lung or pleura acting injuriously and "selectively" upon the nutrition of the bones. Neither can we suppose with Thorburn that the affection is due to a chronic diffuse tuberculosis of bones, there being absolutely no evidence of tubercle in our patient, who, indeed, except for his bone affection, is a remarkably healthy-looking man.

The clinical characters and the skiagrams show that the deformity has been produced by a subperiosteal formation of bone in the deformed parts. What the cause of this has been it is impossible to say. Syphilis can be excluded. The patient denies that he has ever had venereal disease, and there is no evidence of syphilis upon his body.

The only hypothesis I can advance is that the disease in this case may be rheumatic in its essential nature, notwithstanding the circumstance that none of the classical deformities associated with chronic rheumatic arthritis are present. The pain over the thickened bones, the creaking of the knee-joints, and the pains complained of at different times in the shoulders, knees, and ankles, are all in favour of this view. On the other hand, however, it is to be noted that the skiagram of the wrist shows the carpal bones to be unaffected.

Treatment has, on the whole, been very ineffectual. At first he was put upon thyroid gland, with the effect of reducing his weight half a stone in a fortnight, but with no influence on the affected parts. Latterly he has been treated by alkalies, by massage, and by saline baths, with alleviation of his pain and a possible arrest of the progress of the affection. Before leaving the hospital the hands presented, on the whole, a more normal appearance, and he could completely close the right, a thing quite impossible to him on, and long after, his admission.

For the photographs I am indebted to my house physician, Dr. William Burns, and for the skiagrams to Dr. Faulds and Dr. George Macintyre.

A SERIES OF CASES OF ECTOPIC PREGNANCY, WITH REMARKS ON DIAGNOSIS AND TREATMENT.

By JOHN EDGAR, M.A., B.Sc., M.B., F.F.P.S.G.,
Professor of Midwifery and Diseases of Women, Anderson's College Medical School; Surgeon, Glasgow Samaritan Hospital for Women.

(*Concluded from* p. 195.)

Case V.—*Tubal abortion* (?), *with expulsion of complete decidual cast of uterus—Subsequent abortion or rupture ending in formation of retro-uterine hæmatocele—Medical treatment—Improvement.*

Mrs. C., æt. 34, was admitted into the Samaritan Hospital on 8th October, 1896, complaining of severe pelvic pain and of uterine hæmorrhage of three weeks' duration. She has been twice married, the second time four years ago. To her first husband she had five children, to her present husband none.

On the 23rd of September Dr. Gracie telephoned to me that he would like me to see a case of abortion with him. I ordered a cab, and soon joined him. The patient, Mrs. C., I found weak but not collapsed, and bleeding *per vaginam.* Dr. Gracie informed me that ever since her last marriage Mrs. C. had been suffering from pain in her right side and from irregular, profuse menstruation, and that, during this time, she had been under the care of a number of gynæcologists—Prof. Murdoch Cameron, Dr. J. K. Kelly, Dr. Tindal, &c. A few days previously she had begun to bleed *per vaginam,* and shortly before I arrived had passed a complete decidual cast. As the patient had had amenorrhœa of five weeks' duration, and was at the time taking a mixture which had been given her for profuse menstruation, Dr. Gracie concluded that Mrs. C. was suffering from an abortion. I examined her bimanually, and found the os patent, the uterus slightly enlarged, and the right tube distended near its outer extremity to the size of a damson. I informed the doctor of what I had found, and stated that the sactosalpinx would doubtless require an abdominal section later, when patient had regained her strength. As there was a good deal of bleeding, I curetted the uterus very gently, and applied carbolic acid. A few days afterwards I learned that the patient was still weak, and still bleeding, though not profusely.

On the 7th of October I got word that the patient had suddenly become much worse, that she was complaining of severe abdominal pains, and that the bleeding still continued.

On the 8th she was admitted into the Samaritan Hospital, and I found her pale and feeble, temperature 99°, pulse weak and rapid. There was retention of urine. On drawing it off, I found bimanually that the cervix was soft and the os patent, and that the slightly enlarged uterus was pushed forwards to within half an inch of the pubis and slightly to the left side by a large fluctuant mass, slightly tender on pressure, which filled the whole upper segment of the pelvis behind the uterus, though the main mass was more to the right.

The true nature of the case was now clear. The distended right tube which I had felt had been a gravid tube, and the mass which now filled the pelvis was a hæmatocele. After considering the case carefully I resolved to try the expectant treatment. I kept her in bed, put her on light diet, and ordered two vaginal douches daily. The hæmatocele diminished in size, rapidly at first, then slowly.

On 26th October the following note was taken:—"Uterine hæmorrhage ceased two days ago (since admission it had been constant though slight in amount). Patient is constantly complaining of a burning pain in her back, especially under the right scapula. On bimanual examination the mass is now found to be about half the size, and only slightly tender. It still stretches from side to side of the pelvis, but it is limited to the posterior third. Its consistence is boggy. The uterus is placed further back in the pelvis and is somewhat more movable." The uterine hæmorrhage recurred on 1st November, but, as it lasted only till 4th November, and recurred from 26th November till 28th November, and again on the first two days of January, it was doubtless menstrual.

On 8th December patient's general condition had greatly improved, but she was still weak and still complained of burning pain in her back. The uterus was an inch and a half from the pubis, was still sinistroposed, and was now slightly retroverted. The mass behind, still somewhat doughy in consistence though much firmer, had diminished to about the size of an apple. The temperature all along had been slightly subnormal. She was dismissed on 12th December, and has since then been attending the Samaritan Dispensary. The mass has been gradually getting smaller. On Saturday last (24th April) it was of about the size of a hen's egg, and lobulated in shape. It is situated immediately behind the uterus, which has been getting more freely movable. Patient's general condition has greatly improved, but she still feels unable for anything but light housework. The burning pains in her back annoy her considerably.

CASE VI.—*Retro-uterine hæmatocele—Vaginal incision followed by emptying of sac and drainage—Recovery.*

Mrs. M., æt. 40, was sent into the Samaritan Hospital on 23rd December, 1896, by Dr. George Macintyre, complaining of bleeding of seven weeks' duration.

Married for fifteen years, she has had six children, the last of whom was born eighteen months before admission. The labours and puerperia were all normal. The youngest child she nursed for a twelvemonth. Menstruation was then re-established, and was normal in every respect.

Seven weeks before admission, after a period of eight weeks' amenorrhœa, during which she had the usual early symptoms of pregnancy—such as morning sickness—a sudden profuse uterine hæmorrhage with intense abdominal pain set in. The bleeding continued for four days, but soon recurred, and continued more or less up till admission, the longest interval being six days. At first the flow was accompanied with clots, some of them large. The pains at the onset were, she stated, worse than labour pains, and she had a feeling as if something would come away. She felt faint, a cold sweat broke over her, and her abdomen became swollen and tender.

For a week before this she had had slight pains in the abdomen. For the first five weeks she had rectal tenesmus and painful micturition. Up till admission patient was compelled to keep almost constantly in bed.

On examination, I found the vaginal walls slightly prolapsed, the cervix small and indurated, and the os patent sufficiently to admit the index finger to the root of the nail. The uterus was somewhat dextroposed, prolapsed, and pushed forwards to within a finger-breadth of the pubis by a tense, elastic, rounded mass, which filled the whole pelvis up to the level of the brim, and bulged downwards behind the uterus to an inch below the level of the external os. Both mass and uterus were completely fixed, and the sound passed 3½ in. The rectum was compressed and pushed downwards by the retro-uterine mass.

Diagnosis.—Pelvic hæmatocele the result of ruptured ectopic pregnancy.

On 25th December two small portions of the endometrium were removed by means of the curette, but no decidual cells were found.

On the 2nd January, chloroform was given, and having made a transverse incision in the posterior fornix, I introduced two fingers and removed the contents of the sac. These were partly dark fluid blood and partly dark blood-clot, some portions of which were partially organised. There was scarcely any fresh bleeding. The cavity was douched, and then packed with iodoform gauze. Before doing so, I made a careful search bimanually—my two internal fingers being in the sac—for a dilated tube, but without result.

The cavity was thereafter douched daily and repacked with gauze till the 11th, when the packing was inserted into the vagina only. On the 19th the cavity had contracted so much that a uterine sound could not enter farther than an inch and a half. From that time till her dismissal on the 29th patient received simply vaginal douching.

On the 26th the following note was made in the journal:—"Sac has completely closed; only a small transverse dimple in posterior fornix. Uterus adherent posteriorly. No mass, simply adhesions, felt. No pain. Feels well. Has been out of bed since Friday, 22nd January." The cavity had thus taken twenty-four days to close. The temperature was normal throughout.

27th April.—"Patient is looking well. She has menstruated three times—28-day type; duration, three days; quantity somewhat more than formerly. No pain. On examination the uterus is found still slightly prolapsed, but it is much more movable, and the adhesions posteriorly are much less."

CASE VII.—*Abdominal pregnancy—Septic symptoms—Vaginal incision, followed by removal of placenta and four and a half months' fœtus—Drainage—Recovery.*

Mrs. R., æt. 38, was seen by me in consultation with Dr. Stevenson, Motherwell, on 22nd September, 1896, and was admitted into the Samaritan Hospital on the 26th. She complained of severe pains in the abdomen of two months' duration, and of uterine hæmorrhage of four months' duration.

The following history was taken on admission:—"Patient's menstruation began at the age of 12, and was always regular, though considerable in quantity. There was, however, no pain till after the birth of her third child, since which time there has been pain in the left iliac region with each menstrual period.

"She has been married fifteen years, and has had six children, the last fourteen months ago. At her fourth confinement she had post-partum hæmorrhage. After an attack of influenza five years ago she had two abortions, the first at the sixth month and the second, two years ago, at the third month. She became pregnant with her sixth child before the next period was due. During her pregnancies, except with the fifth, she was never troubled with morning sickness. She always got up on the third day, and she nursed all her children. Menstruation always went on regularly during lactation after the fourth month.

"While nursing her last child patient menstruated regularly till the middle of March, 1896, when she thought that she became pregnant, the baby at the breast being at that time 7½ months old. There was an interval of ten weeks' amenorrhœa, and then at the end of May uterine hæmorrhage set in. At this time there was no pain, nor fainting, nor vomiting. The bleeding has continued more or less ever since. For the first two months there was scarcely any abdominal or other pain; but at the end of July she was seized with a sudden pain all over the abdomen, and became so prostrate that she was compelled to send for her doctor. The bleeding, however, was less profuse than it had been previously. Up till the end of August she was so weak that she had to remain in bed. Though the bleeding still persisted, she improved somewhat after that time.

"On 16th September she got worse again, and complained of slight 'shivers.'

"I saw her on the 22nd, and while examining her found a portion of uterum mucosa lying in the vagina. Latterly mucus has been passed per rectum, and micturition has been very difficult."

On admission patient was found to be very ill. She was thin, anæmic, and had sunken eyes and an anxious expression. The tongue was dry and fissured. The temperature was 100·6° F.; the pulse small, easily compressible, and 120 per minute; and the respiration-rate 26 per minute.

The abdomen was distended, more on the right side than on the left. On palpation a uniformly tense, elastic, and tender mass was felt rising from the pelvis to the level of the umbilicus, and extending from side to side, but bulging more on the right side. Light percussion gave a tympanitic note all over except in the hypogastrium.

On vaginal examination the cervix was found to be very soft, and situated in the middle line at about the middle of the symphysis pubis. The whole uterus, which was slightly enlarged—the sound passing 3½ inches—was pushed forwards against the pubis by the rounded elastic mass already described. This mass was felt *per vaginam* to occupy the whole upper half of the pelvic cavity. It bulged down to slightly below the level of the os externum. This bulging was more marked on the left side. Both uterus and mass were quite fixed. The body of the uterus was directed more to the left side, so that the uterus was somewhat sinistroverted. The cervical canal was so patent that the finger could be introduced into the cavity of the uterus, which was found filled with soft clot. Examination per rectum showed that the rectum was pushed down. Its lower part was roomy, and was roofed in by the elastic mass already described. No fœtus could be felt by the vagina or abdomen, nor could the fœtal heart be heard.

Up till the time of the operation patient continued very weak; temperature, 99° to 102° F.; pulse, 120 to 140, and very small and feeble; vomiting and diarrhœa, the stools consisting almost solely of blood-stained mucus.

On 1st October I made a transverse incision in the posterior fornix, and found the placenta, which was large and well-formed, occupying the pouch of Douglas. Using placental forceps and two of my fingers, I removed it bit by bit. While removing the placenta I made out a four and a half months' fœtus presenting by the head. Seizing it with the forceps, I extracted it and cut the funis. After its removal it was found to be slightly fœtid. The rest of the placenta was then removed, and the hæmorrhage, which had hitherto been moderate, became very profuse. No old blood nor blood-clot, however, escaped. The hæmorrhage was rapidly arrested by packing the cavity with eight small sponges soaked in hazeline. Three additional small sponges were packed into the vagina. The whole operation lasted ten minutes.

Next day patient was still weak, but the temperature was normal and no bleeding had taken place. Four of the sponges were removed and replaced by iodoform gauze.

On 3rd October patient was stronger. All the sponges were removed, and the cavity was douched and packed lightly with iodoform gauze. There was no hæmorrhage.

This treatment was continued at first daily and then every second day till the 25th, when the cavity was found to have contracted to a small sinus 2 inches in depth. Subsequently vaginal douching was employed. Patient rose daily on and after the 24th.

On 6th November she left the hospital—*i.e.*, five weeks after the operation. The cavity was closed, and was replaced by adhesions, which bound the uterus back. The uterus could be moved upwards and downwards, and, to a slighter extent, to either side. It was felt to be distinctly dextroverted.

27th April.—"Mrs. R. is stout and in good health. Menstruation has been four- to six-weekly, but otherwise is as before her illness. She suffers no pain at any time. Micturition is normal, and her bowels are, as usual with her, constipated. On examination the uterus is felt in its normal position. There are still a few adhesions posteriorly, but the uterus has fairly good mobility."

One or two of these cases present features of unuusal interest. The fourth is a case of repeated tubal pregnancy, an occurrence which Forsström, in the *Finska Läkaresällskapets Handlingar*, xxxviii, 9, reports as happening very rarely; he quotes twenty cases, including one of his own. Another unusual feature in this case is the extremely small amount of blood which escaped from the ruptured tubes, and yet the hæmorrhage was sufficient to cause syncope, though not death.

The second case is another of special interest, in that it is an example of the coexistence of tubal pregnancy and appendicitis. In this case it is noticeable that the attacks of appendicitis occurred only during pregnancy and the puerperium. Abrahams, in the *American Journal of Obstetrics*, February, 1897, was able to collect from the literature only fifteen cases of appendicitis complicating pregnancy, four of which were his own.

I might call your attention to other points of special interest in this series of cases, but my purpose to-night is not to discuss rarities, but rather to raise a discussion regarding a broader and much more important matter, namely, the diagnosis and treatment of ectopic pregnancy. The importance of the subject rests on the comparative frequency and the gravity of the condition, and on this account I think we ought to urge upon general practitioners, under whose care the great majority of such cases are in the first instance placed, the necessity of being on the outlook for them. It is only too commonly the practice for medical men to regard ectopic pregnancy as a *rara avis*, as a disease met with almost only by gynæcologists, and even by them very rarely, so that when they come across a case they tend to leave it out of consideration altogether, and thus are apt to make an error in diagnosis, an error which may prove disastrous to the patient's life or her continued wellbeing. That ectopic pregnancy is much more frequent than is generally supposed is a fact now well known to gynæcologists; for instance, in Frommel's *Jahresbericht über die Fortschritte auf dem Gebiete der Geburtshilfe und Gynäkologie* ten years ago only seventy-five cases were referred to, whereas the 1896 edition quotes one hundred and twenty papers on the subject, many of which are based on a series of cases. That this increase does not depend on the affection being more common now than formerly admits, of course, of no doubt; it is due to our better knowledge of the subject, and to the greater attention which the disease attracts nowadays.

Diagnosis.—As the series of cases which I have described all belong to the first half of pregnancy, I shall confine my remarks on diagnosis to this period, the period in which the vast majority of cases of ectopic pregnancy are encountered.

1. *Preceding sterility*, at one time regarded as of importance in diagnosis, has now become relegated to the background. All my seven cases had had children previously; in one of them ectopic pregnancy had occurred only fourteen months, in two of them only seven and a half months, after the delivery of a full-term child.

2. *A history of preceding iliac pain* is frequently, though not invariably, obtained. In all the seven cases I have described, with the exception of the fourth and sixth, there was such a history. It indicates possibly some antecedent disease of the corresponding Fallopian tube or its peritoneal covering.

3. *The early symptoms and signs of pregnancy*, of immense importance when present, cannot always be relied upon, not even the very important one, the one most commonly present, delayed menstruation; for instance, in Case II the first uterine hæmorrhage appeared a day before the menstrual period was expected, and was, therefore, mistaken for it. In all the other cases, menstruation was, as usual, delayed, and in all, but the first three, there were also morning sickness and breast symptoms, indicating the probability of the presence of pregnancy.

4. *The symptoms of internal hæmorrhage* are of the first importance in the diagnosis of most cases, as it is extremely seldom that a case comes under our care before this event has occurred. Sometimes there is only one attack, but more often there are one or more repetitions. As a rule, the first occurs between the fourth and the eighth week, occasionally later. Each attack is characterised by great suddenness, and in most, but not in all cases without the patient having undergone any previous strain or injury. There are violent abdominal pains, which are described as colicky or labour-like, and which in many cases amount to agony, and these are accompanied, in a more or less varied degree, with abdominal distension and

tenderness, vomiting, anæmia, and collapse. It must be remembered, however, that sometimes the internal bleeding is accompanied with few or no symptoms of collapse. It is generally stated, and can be well understood, that the associated symptoms are more severe in cases in which the tube has ruptured than in cases of tubal abortion. However, nothing definite can be asserted in this respect in any given case before operation.

When symptoms of internal hæmorrhage occur it is not always possible to be certain of one's diagnosis as to the cause; but the frequency of ectopic gestation, the history of a delayed menstruation which is usually elicited, the fact that the pain and tenderness are generally most marked in the hypogastrium or one iliac region, and the occurrence of external uterine hæmorrhage, which, as a rule, follows the attack either immediately or within a day or two, are sufficient to direct one's suspicions to the true source of the bleeding. Physical examination does not always lend material assistance. When the blood has been extravasated in large amount, there are distension of the abdomen with dulness on percussion at the flanks, and a feeling of fluid resistance in Douglas' pouch; but the gravid tube cannot generally be felt owing to the distension and the tenderness. If the tube can be made out, the diagnosis is almost certain. I say almost, because Martin (*Die Krankheiten der Eileiter*, p. 365) reports five cases in which, with a distended tube, there were delayed menstruation, labour-like pains, external uterine hæmorrhage, a non-gravid uterus, and an apyrexial course, and yet, when he operated, he found in each case not a gravid tube, but a pyosalpinx with chronic exudative peritonitis. The expulsion of a uterine decidua does not occur, as a rule, till several days later, so that this aid to diagnosis is not of service at the stage of rupture or abortion.

5. *Uterine hæmorrhage and the expulsion of a decidua* are, as already indicated, of extreme importance in the diagnosis of extra-uterine pregnancy. The uterine mucosa generally comes away in shreds, though occasionally, as in Case V, a complete cast is expelled. Frequently none is observed at all. The hæmorrhage may last only a few days, or may go on intermittently or continuously for weeks or even months. Continuous bleeding is more typical of tubal abortion than of tubal rupture. I feel compelled here to emphasise the importance of remembering that uterine hæmorrhage is one of the symptoms of ectopic pregnancy. I have repeatedly seen patients who had been sent into hospital as cases of incomplete

uterine abortion, of uterine myoma, or of endometritis, &c., and who were really suffering from extra-uterine pregnancy. This warning is all the more important nowadays, when curettage has become so fashionable, not only among specialists, but also among general practitioners. A careful bimanual examination ought always to precede the operation, and no one who has had insufficient experience in bimanual examination should attempt to curette a uterus.

6. *The condition on bimanual examination* varies according to divers circumstances; for instance, according to whether the examination is made before, at the time of, or after rupture or abortion, according to whether much or little blood has escaped, &c. It is, as already stated, very seldom that a patient comes under the care of the physician prior to hæmorrhage taking place, but several such cases have been correctly diagnosed. As there are, at this stage, no symptoms beyond, possibly, delayed menstruation, and, sometimes, slight pains in one iliac region, the diagnosis has to be made almost exclusively from the fact that one of the tubes is found possessed of a rounded or oval swelling of boggy consistence, and, as a rule, fairly free mobility, and that pulsation in the corresponding vaginal fornix is increased. If one should determine to watch the case, this swelling would be found to increase progressively in size; but the danger of internal hæmorrhage, even when the patient is kept absolutely at rest, must always be kept in mind.

At the time of rupture or abortion, bimanual examination, as already indicated, affords little or no assistance in the diagnosis. It is different, however, when several days or weeks have elapsed. Examination then reveals a boggy or elastic distended tube, more or less fixed, and not especially tender, or a boggy or elastic hæmatocele or hæmatoma, more or less filling up the pelvis, to which and to the uterus it is firmly adherent, and often reaching well above the pelvic brim. Sometimes in these cases a creaking sensation under the fingers, like the crackling of snow in the hand, is made out, and should strongly suggest the presence of extravasated blood. Vaginal pulsation is generally well-marked, whether the child be living or dead, and in many cases it is felt more distinctly in the fornix corresponding to the gravid tube. Absence of pulsation furnishes a strong proof of the death of the child. The uterus, enlarged and softened, is found displaced, and the os is often patent, and may in some cases, as in Case VII, be so much so that the finger can enter the uterine cavity without difficulty. The case just quoted is an example of the impossibility in many cases of differentiating between pelvic hæmatocele and abdominal pregnancy.

The examination in all cases must be conducted with gentleness, as a slight degree of force may be sufficient to lead to rupture or abortion, or, should either of these have already occurred, to a further hæmorrhage, possibly with disastrous consequences.

7. *What is the value of curettage in the diagnosis of ectopic pregnancy?* In four of my cases I took a couple of scrapings of the endometrium, and found in three of them decidual cells in great abundance. In the fourth (Case VI) none was found, but here the internal hæmorrhage had taken place seven weeks before, and had resulted in the formation of a hæmatocele, so that I have no doubt the decidua had been completely expelled, or else degenerative processes had resulted in the complete disappearance of the decidual cells. Webster, v. Ott and others speak very strongly of the importance of decidual cells as a positive evidence of pregnancy; their absence they very rightly regard as not excluding pregnancy. Martin, on the other hand, denies their importance. Ruge, in Winter's *Lehrbuch der Gynäkologischen Diagnostik*, draws attention to the fact that similar cells may be found in glandular endometritis, but adds that they have not the same uniformity of size, and are not found in the same adundance, nor are they met with in all the layers, as in the decidua of pregnancy. When decidua cells, then, are unmistakably present in abundant groups, I think we may take it that their value in the diagnosis of pregnancy is very great; when absent, nothing definite can be deduced. At least two distinct portions ought to be removed and examined, otherwise, owing to degeneration or to partial expulsion of the mucosa, no characteristic cells may be found. Schauta, in his *Lehrbuch der gesammten Gynäkologie*, speaks strongly of the danger of curetting in such cases, the danger of bringing about tubal rupture or abortion, or of causing septic infection. I have no doubt that there is a real danger here; but with care, using every antiseptic precaution, employing no force, and watching that the uterus is simply steadied and not pulled down by the bullet-forceps, the danger is very slight, if any.

Differential diagnosis.—I shall have time to enter into only one source of fallacy, namely, ordinary uterine abortion. This is the mistake which I have seen made most commonly, and curiously enough, it is little, or not at all, discussed in the text-books. In both tubal abortion or rupture and uterine abortion, after a shorter or longer period of amenorrhœa, accompanied often with the other early symptoms of pregnancy, there is an attack characterised by labour-like pains, uterine hæmorrhage, which may continue indefinitely, and the expulsion of a uterine decidua. Thus, the two have many points in common, and it is not to be wondered at that the mistake is so often made.

In Case V the decidual cast was a complete one, such as one not unfrequently gets in cases of uterine abortion; all the above symptoms were present, and the patient had been taking a mixture presumably containing ergot, so that it was natural for the medical attendant and myself to conclude that the case was one of ordinary abortion, and, when I examined and found the sactosalpinx, the long history of pelvic pain made me conclude that she was suffering from pyosalpinx. Fortunately, on account of the tubal distension, I curetted the uterus very gently, and so did not bring about a second internal hæmorrhage.

As the mistake, then, is so easily made, I should anxiously entreat everyone, who has to do with what is apparently a uterine abortion, to first of all enquire carefully into the history and general condition of the patient, and then make a careful bimanual examination. In diagnosing tubal abortion or rupture, the points of distinction on which stress should be laid are as follows:—(1) The condition of the patient would almost always be much more serious than in uterine abortion; (2) the uterus would not likely be of exactly the same shape, size, and consistence; (3) the decidua would show no trace of chorionic villi; (4) a boggy swelling would be felt at the side of or behind the uterus, manifestly tubal, as evidenced by feeling the isthmic portion of the tube connecting it with the uterus, and generally more movable than would be the case with a pyosalpinx; and (5) probably pulsation would be more marked in the corresponding fornix than in the other.

Treatment.—I have little hesitation in saying that all, or almost all, cases of extra-uterine pregnancy should be operated upon. Martin states that the medical literature from 1876 to 1893 shows a greater mortality in cases treated by the expectant method than in those submitted to an operation. Out of 278 of the former only 33 per cent recovered, whereas of 636 cases on which an operation had been performed, almost 80 per cent recovered. Of course, when one thinks of such cases as that of Mrs. B. (Case IV), where a rupture occurred in the right gravid tube in May of last year, and subsequently gave rise to no trouble, and when one reflects that it is highly probable that many cases of tubal rupture or abortion must escape recognition, and yet not result in the death of the patient, one is apt to doubt the general advisability of operating. Would that we only knew what cases could be safely left alone—left alone without the grave risk of death or disease being incurred! But unfortunately we cannot do so. Certainly in the cases where the gravid tube is diagnosed before rupture—and, I think, most will agree, also, in the cases where internal hæmorrhage has just taken place—an operation is imperative.

When the case is seen at the time of rupture or abortion, the shock should first be treated by means of saline transfusion and stimulant injections, and the pelvis should be raised. Then, whenever the patient has so far recovered, or, in desperate cases, without waiting, cœliotomy ought to be rapidly performed, and the tube ligatured and removed. Further injections of saline solution may often require to be administered after, or even during, the operation. Some gynæcologists—*e.g.*, Condamin (*Arch. de Toc. et de Gyn.*, vol. xxi, No. 2)—advise leaving such cases alone till encapsulation of the blood occurs, and subsequently performing vaginal incision and drainage, but the risk of the hæmorrhage proving fatal would deter most men, in severe cases at least, from such a course.

But what about cases where internal hæmorrhage has taken place some days or weeks before? Suppose we get such a history and such a condition on bimanual examination as in the first four cases I have described. In none of these four cases could a trace of the embryo be found, and gestation had not advanced sufficiently far for a placenta to have been formed. I have no doubt that in most cases such as these absorption would take place, and the patient would recover; but, unfortunately, there are risks to be run through letting the patient alone, and we have no means of deciding which are the cases that would recover, and which are the cases that would succumb. Whether in the majority of cases the general health would break down, whether the patient would for years suffer from chronic tubal disease and pelvic peritonitis, I am not prepared to say. Martin mentions eight cases in his work, *Die Krankheiten der Eileiter*, p. 364, where the patient suffered subsequently from vague abdominal pains, and slight difficulty in micturition and defæcation. In these cases, medical treatment having failed, cœliotomy was performed and the tube removed. Chorionic villi were discovered in the coagulum, and some of the cases had developed into pyosalpinx. Further observations, however, are necessary before one can say that it is common for tubal disease to follow on a tubal pregnancy which has been left alone.

There are, however, two other dangers of which we can speak more decidedly—viz., the danger of the embryo surviving and developing further; and, whether the embryo be alive or dead, the danger of a second internal hæmorrhage. I have no doubt, in the case of Mrs. C. (Case V), that, at the time when I first saw her, tubal rupture, or, more likely, tubal abortion had taken place, and yet, a couple of weeks afterwards, there was a profuse internal hæmorrhage, which resulted in a hæmatocele filling up the pelvis, and which very nearly brought the patient to her end. Such a case as this makes one pause. Cases like it are only too common; so that, at least for the time being, until we have surer ground to work upon, I think it advisable not to adopt the *laissez faire* policy.

There is one class of cases, however, where it is perhaps more legitimate to think of adopting the expectant method of treatment—I mean the cases where abortion or rupture has resulted in the formation of a hæmatocele. In Case V, I tried this method, but I cannot say I have been satisfied with it. There is no doubt that in her case no further hæmorrhage occurred, an event which one cannot deny may happen; nor did the blood-mass suppurate. On the contrary, it became gradually absorbed; but the process was tedious, and in the end not so satisfactory as vaginal incision, followed by turning out of the contents of the sac, as in Case VI, and fully a dozen cases of the same kind, which I had under observation in the Royal Infirmary while with Dr. Stirton. When I saw Mrs. C. a few days ago, seven months after rupture had occurred, she was still complaining, and there was still a mass of fully the size of a hen's egg in the pouch of Douglas. Perhaps, as she was suffering from pelvic mischief for four years beforehand, hers is not a good case to found judgment upon; but I am so well satisfied with the other form of treatment that I shall not be easily convinced in favour of the expectant method. I may add that, according to Veit, the mortality in cases of hæmatocele is still 25 to 28 per cent.

With regard to operative treatment there is, first, the question as to what is to be done in the early months. In cases where the ovum, in whole or in part, is still in the tube (*i.e.*, either before or after rupture or abortion), and where no hæmatocele has formed, the usual practice, and the practice which I have followed, is to perform cœliotomy, either abdominally or vaginally, and remove the tube. But, latterly, doubts have been thrown on whether this is always the best method. Prochownick, in the *Festschrift* of the *Deutsche Gesellschaft für Gynäkologie*, in 1894, published a case of rupture of a gravid tube, in which, after removing the contents, he simply stitched up the rent. The important point in this case is that it was the only tube the woman had, and yet, in 1896, she again became pregnant, and this time the pregnancy was uterine, and went to full term. Martin, without having heard of Prochownick's case, described another of much the same kind in the January number of the *Monatschrift für Geb. und Gyn.* of this year. In his case rupture had not occurred. He laid open the tube in the direction of its length, having previously made sure that the tube was otherwise normal and the *ostium abdominale* patent, emptied it, and then stitched up the incision. You will agree with me, I think, in saying that this treatment requires consideration, and should be adopted in suitable cases.

Finally, there is the question between vaginal and abdominal section in cases of hæmatocele or hæmatoma, and of ectopic pregnancy in the latter half of its course. So far as my experience goes, I am, as I have already indicated, strongly in favour in such cases of the vaginal operation, provided a free opening be made under aseptic precautions, and the contents of the sac cleared out. This method I adopted in Cases VI and VII. The only exception I should make would be when the child is at or near full term. In such a case the difficulty of extraction *per vaginum* would counterbalance any advantages which might be otherwise gained.

The advantages of the vaginal incision are manifest—viz., (1) the fact that drainage is secured at the lowest point; (2) that the patient is saved the risk of getting ventral hernia; (3) that the operation involves less shock; (4) that recovery is quicker; and (5) that the peritoneal cavity does not, in the cases we are considering, require to be opened, a thing not always easy to avoid in the abdominal operation.

But what are the objections? One often stated is that, in cases of hæmatocele, by simply emptying the sac of its contents, you leave the gravid tube behind, and hence run the risk of a further hæmorrhage or of future tubal disease. *A priori*, one would think that either or both of these results would be almost inevitable, and yet, though my experience in this mode of treatment has been fairly large, I have never seen either of them occur. However, what I should advise, and what I did in Case VI, would be a careful bimanual examination with the two internal fingers in the sac, in order to find whether one of the tubes be enlarged or not. Should a tube be sufficiently large to be easily felt, and, therefore, presumably contain the placenta, I should then advise a further operation by the vagina if possible, by the abdomen if not, with the object of removing the tube. If the tubes be not felt, I should be content with the one operation, but, of course, should keep a lookout for any hæmorrhage at the time or subsequently. If such hæmorrhage could not be controlled by packing, as in Case VII, I should at once perform abdominal section; and in all vaginal cases of this nature I prepare the patient beforehand for the abdominal operation, lest such should prove necessary. However, as I have already stated, I have never required to do so.

Webster, in his work on *Ectopic Pregnancy*, states another objection to the vaginal operation—viz., that the placenta may be cut or torn into, resulting in excessive hæmorrhage. He says—"It is no easy matter to say, on clinical examination, where exactly the placenta is placed. It is rarely made out;" and he goes on to state that, when the placenta is situated in the pouch of Douglas, it will be inevitably cut into, and excessive hæmorrhage result. Of course, the same may be said of the abdominal operation, but in such a case the bleeding would very often prove fatal, whereas I contend that in the vaginal operation the hæmorrhage can be rapidly arrested by the means I adopted in Case VII, where this accident did occur.

If the placenta be in some other situation, then the best plan is, as is by most operators advised also in the abdominal operation, to leave it alone; and this is where one of the chief advantages of the vaginal operation comes in—viz., the greater freedom from the risk of sepsis, inasmuch as drainage is at the lowest point, and the peritoneal cavity has not been opened. Therefore, no matter where the placenta is situated, the vaginal, so far as it is concerned, is the better operation. In Case VII, I feel sure, more especially as septic symptoms had developed prior to the operation, that, had I opened the abdomen in front, the woman would have run a much greater risk than with the operation I selected. In the *American Gynæcological Transactions* of 1896, Howard A. Kelly reports thirteen cases in which tubal pregnancy in the early months had ruptured, and in which he had operated by practically the same method as I have adopted. All his patients recovered with the exception of one, who died on the sixth day with symptoms of uræmia.

SURGICAL TREATMENT OF ACUTE RHEUMATIC ARTHRITIS.

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I FEEL diffident in calling attention to what may at first sight appear rather heroic treatment for acute rheumatism, and before entering on such a delicate task I think it right to state that I am fully cognisant of the enormous labours which have been bestowed on this malady by most competent medical scientists. But as my own clinical observation has led me to differ from the many theories which have been promulgated, I wish to briefly ventilate my ideas on the subject, without presuming to criticise the views which others hold dear.

In my opinion, acute rheumatism is primarily a joint affection, due to some morbid material conveyed by the blood; that this poison—be it germ, ptomaine, or ferment—gains admission to the human body through the tonsil, or through one of the many doors open to such intruders; that the joint invasion is promptly followed by a form of acute arthritis with general toxæmia; and, furthermore, the infected joints serve as incubators, where the poison is elaborated and poured into the circulation, and by this latter agency conveyed to other articulations and to the heart, and in some cases the joints retain the virus in a latent form until some chill, &c., rouses it into activity.

Holding such views, I feel it necessary to suggest that the term acute infective arthritis be substituted for acute rheumatism—the latter in reality is a vague expression, with little or no etiological or pathological significance—and the prefixes gonorrhœal, pyæmic, tubercular, syphilitic, &c., may be conveniently retained in order to differentiate the arthritis peculiar to each.

The next thing to be done is to see if there are any other affections which are in any way analogous, and, if so, what treatment of them is most beneficial. Gonorrhœal arthritis and pyæmia bear resemblance in many respects, and I find that the only successful treatment for a gonorrhœal or pyæmic joint is to immediately open, irrigate, and drain it. (In case that this latter statement should be questioned, I append four cases which I think will help to justify such a conclusion.)

It is unnecessary to occupy space by detailing the advantages which would accrue from a treatment of this horrible malady, whereby its progress could be stopped and its cause possibly eliminated from the system.

Medicine has done good service, but there are few of us who have not seen many desperate cases in which salicylates, alkalies, flannel, and everything else miserably failed; and, furthermore, I maintain that it is impossible to prognosticate in any given case, at onset, whether the person will recover unscathed, be left with a damaged heart, or have an accumulation of virus left latent in the articulations, ready at any moment, on slight provocation, to flare up and endanger the existence of the individual. Therefore I have no hesitation in suggesting that recourse should be had to surgery in order to see if it is possible to more successfully combat such a treacherous disease.

In the case about to be described, not only was surgery successful, but the result clearly proved that operation was delayed too long.

B. C., aged 41, clerk, was admitted to British Hospital on 21st June, 1897.

History.—Nine days ago, on leaving his office, he "caught a chill." Two hours later he had acute pain in left elbow; this was soon followed by pains in both knees, with fever, shivering, sweating, and general malaise. He remained in bed, and two days later sent for a doctor, who diagnosed rheumatic fever, and prescribed 15 grs. of sodæ salicyl. every three hours, flannel around joints, magnesia sulphatis, and fluid diet. His doctor found his temperature was 103·4°, and knee-joints swollen with considerable effusion.

Past History.—Never had any serious illness; gonorhœa fifteen years ago; an alcoholic tendency.

On admission patient presented a worn-out appearance, due, as he said, to sleeplessness. His temperature was 102°; tongue thickly coated; pulse, 80; continuous sweating; urine scanty, high coloured, full of urates, with a trace of albumen; anorexia; slight pain in left elbow without swelling; both knee-joints were swollen and painful; patellæ floating, with some peri-articular inflammation and slight œdema; heart and other organs normal; diagnosis, rheumatic fever; treatment, 15 grs. of sodæ salicyl. every three hours; joints enveloped in warm wool and flannel bandages; he was placed between blankets and given milk diet.

A week later, as no improvement had taken place, salicin was tried, the only result being that pulse fell to 56.

1st July.—Alkalies were substituted for the salicylates, and warm fomentations were applied to swollen knees. As pulse was becoming very weak, strychnine was injected every six hours; also mist. vini gallici, Brand's essence; coffee and beef-tea ordered.

12th July.—No improvement, patient decidedly losing ground; half drachm doses of turpentine given every six hours.

14th July.—Condition worse; mist. quinine given every four hours.

16th July.—Pulse weak and compressible, fever continued, very emaciated, lay like a log in bed, lost all desire for nourishment, tongue foul, knee-joints more distended and painful, transitory twinges in left elbow; and, as he could not take food in sufficient quantity, nutrient enemata were ordered.

I now found myself placed in a very unenviable position, for I believed that surgery would save him, but I feared that the anæsthetic might kill him. However, I decided that death on the operating table was preferable to the slow torturing process, and on 17th July ether was administered, a 2 inch incision made into right knee-joint, 4 oz. of greenish, turbid, flocculant serum, with many large masses of lymph, were removed, irrigation with 1 in 5000 biniodide lotion, and gauze drain inserted.

Owing to his corpse-like aspect I shrunk from attacking the left knee. He was promptly removed to a warm bed, and anti-shock treatment liberally applied.

On the following day the dressings were removed; drain soaked with serum, pain considerably diminished.

3rd day.—Again dressed. Joint quite dry; swelling had disappeared; no pain on palpation; drain left out.

6th day.—Joint normal in contour; wound healing aseptically. Patient felt greatly relieved on "that side."

16th day.—Wound healed; active movement through half a right angle without any pain; joint normal in appearance.

The day following operation he complained more than ever of the pain and tension in left knee. Poultices were applied without benefit. By the sixth day all the general symptoms were as marked as heretofore, and it was evident that the only way to avoid a fatal termination was by operating at once.

24th July.—Arthrotomy; 6 oz. of greenish turbid serum and many large lymph flakes were removed. One of these masses was found becoming organised, numerous small blood-vessels having formed in it. The joint was irrigated and drained. Peri-articular thickening and œdema were very marked on this side, particularly in popliteal space.

First day, temperature did not exceed 99°; pain ceased. An uneventful recovery followed, the joint rapidly resumed its normal contour, except the thickening in popliteal space, which slowly disappeared. Fever did not return, pain ceased in elbow, tongue cleaned, appetite returned, sweating stopped, and he was allowed out of bed on 10th August, able to partake of full diet, cod-liver oil and iron. For some time after this he complained of stiffness in left popliteal space, caused by the thickening and œdema around tendons. Convalescence was slow owing to the intense prostration, but he rapidly gained flesh, and was discharged cured five weeks later.

The information derived from this case was (*a*) that arthrotomy had an immediate curative effect on the arthritis of right knee; (*b*) that delay in operating on left one allowed the inflammation and œdema of surrounding structures to assume a chronic form; (*c*) that this arthritis is amenable to surgical treatment; (*d*) that the general toxæmia disappears once the infected joints are opened, the morbid material cleaned away, and drainage provided; and (*e*) no patient, however bad, suffering from acute infective arthritis should be permitted to die without giving him a surgical chance.

As no line of treatment is worth much without a plan, I wish to suggest a few working principles.

Operate as soon as possible after the disease has declared itself (by causing swelling or effusion in a joint). Do not wait for other joints or for the heart to confirm the diagnosis —if operation is to be curative, like in pyæmia, the sooner done the better.

When more than one joint is found affected, operation should be at once undertaken, even if the heart has been already attacked. No good can come from allowing the infected joints to continue as incubators for the virus, for our object ought to be to save the endocardium from further destruction, to protect the non-infected joints, and, if possible, eliminate the poison from the system, as well as cure the infected joints themselves.

Acute Epiphysitis—Pyæmia—Operation—Recovery.—A.S., aged 5½ years, entered hospital on 4th May, 1897.

History.—Very healthy until 23rd March last, when he suddenly complained of severe pain at lower end of tibia, accompanied by fever and shivering. On the following day his father observed some swelling in same region, and immediately sought medical skill; poultices were ordered, and kept going night and day until 1st April. Fever, rigors, and sweats continued. The swelling had extended upwards to middle of leg and downwards into ankle-joint; a small incision was made on each side of tumefaction, and a teaspoonful of matter removed. Constitutional symptoms continued getting worse, and on 10th April a fluctuating swelling suddenly appeared on chest to inner side of right nipple; an incision was made into it, pus evacuated, and it healed. On 14th April, pain was complained of in right elbow; it rapidly became swollen, and poultices were applied to it until 23rd April. A consultation was now held, chloroform administered, and an incision made to inner side of olecranon; "nothing found;" also a 5-in. incision was made in site of former cut over tibia, but no purulent collection was encountered. The bone was found bare, and the operator drew the father's attention to the "hard ring caused by the probe touching the bone;" this, the surgeon said, was a "good sign."

25th April.—Some pus was seen exuding from the ankle and elbow. The father lost confidence in the local talent, and determined to run the risk of bringing his son some 400 miles by train to the British Hospital.

Condition on Admission (*4th May*).—Emaciated; tongue furred and dry; pulse, 120; temperature, 104°; respirations, 30; clammy sweat; anorexia; intense pain complained of in left leg and right elbow. The leg was enormously swollen from below ankle to knee (evidently the latter joint was not involved, as passive movement was permitted), two unhealthy pouting wounds were seen, covered with profuse pale granulations and bathed in pus. The whole leg looked like a mass of dirty brawn.

The right elbow was swollen and fluctuating, with a nasty suppurating everted wound on inner side.

Chloroform was at once administered, and I made an incision commencing at insertion of patellar ligament and ending in the ankle-joint. The whole tibia was found bare and necrosed, and little or no pus was so far met with. I then opened up the medullary cavity, and found a tube of pus extending from ankle-joint to upper epiphysis of tibia. With a gouge the whole cavity was exposed, and a large gutter made; finally, the business was finished with a Volkmann's spoon; only a thin narrow strip of posterior border of tibia remained. This enormous wound was swabbed with liniment of iodine and plugged with iodoform gauze. The ankle-joint was also opened up, scraped, swabbed with iodine, and packed with gauze.

The elbow was then attacked by an anterior and posterior incision. Joint found full of pus, but as no dead bone was felt I resolved to make an attempt to save it. All visible pus was cleared out, the interior swabbed with iodine, irrigated with 1 in 1000 biniodide lotion, and a large drainage-tube inserted through joint.

1st day.—Elbow dressed, slight purulent discharge; temperature normal.

3rd day.—A sudden rise in temperature to 104°; sweats; elbow found more swollen and purulent; leg and ankle wounds healthy.

6th day.—Tongue again becoming dry, fever, rigors, and sweats continuing, and, notwithstanding frequent irrigation, &c., amputation had to be performed on 10th May, through middle third of humerus. Suppuration followed in stump, flaps sloughed, necessitating the removal of other 2 in. of bone on 8th June. Union followed by first intention.

The leg and ankle wounds filled in, I may say aseptically, and he was discharged cured on 21st June, with good movement in ankle-joint and wound healed. All that remained of the leg wound was a healthy granulating surface, 2 in. in width and 7 in. in length, level with skin.

Six weeks later he was brought to hospital for inspection. The wound looked excellent, and his father stated that the boy had gained 7 kilos. in weight since date of discharge. As far as could be judged by palpation his tibia had reformed.

Gonorrhœal Arthritis—Operation—Recovery.—S. A., cattleman, aged 34, was admitted to hospital on 20th March, 1897.

History.—In 1882 he suffered from gonorrhœa, with accompanying arthritis of both knee-joints; he was unable to walk for some months. In 1894 he contracted a fresh dose of the gonococcus; both knees were again attacked, this time "he was crippled for eighteen months."

On 28th February, 1897, he received this third infection; ten days later his left knee became painful, swollen, and stiff; he also had occasional pains in left shoulder. As his knee was gradually getting worse, he entered hospital on above date.

On admission, he suffered from a profuse gonorrhœa, with transitory pain in left shoulder; the left knee was found distended, painful, and partially flexed, the slightest attempt at movement caused him excruciating agony; the patella was floating, and circumference of joint was 1½ inch more than that of its fellow; general condition normal.

Gonorrhœal arthritis having been diagnosed, the joint was first blistered, then put up in a Scott's dressing, and lastly the limb was placed in a long Macintyre splint. Pot. iod. and santal oil given internally, and urethral injections of chlor. zinc administered every four hours.

Three days later he complained very much of pain; the Scott's dressing and splint were removed for inspection, and, as the condition was found in no way improved, arthrotomy was performed on 24th March; about 4 oz. of greenish flocculent serum was removed; on digital examination, numerous large flakes of lymph were detached by finger, and removed by irrigation with 1 in 5000 biniodide lotion, and gauze drain inserted. Pain immediately disappeared; no constitutional symptoms followed. Primary dressing removed on third day; joint quite dry, painless to touch, and normal in contour; drain dispensed with.

30th March.—Wound healing in depth; he painlessly flexed his knee through right angle.

10th April.—Full range of movement restored, joint normal; allowed out of bed.

A few days later he developed a sharp attack of dysentery, which confined him to bed until 4th May. As the gonorrhœa still continued, he was kept in hospital until 21st May, when he was discharged completely cured of his various troubles.

Gonorrhœal Arthritis—Operation—Recovery.—C. N., aged 30, contracted gonorrhœa eight months prior to admission, and as no proper treatment was adopted, the discharge continued all this time. On 14th March he complained of pain in right knee, and two days later the joint became swollen and stiff. He was admitted to hospital on 19th March, suffering from a purulent urethral discharge, with right knee-joint painful and swollen (patella floating); the leg was slightly flexed, and movement was impossible owing to pain caused on attempting same. Aspiration was performed, and 2 oz. of greenish turbid serum removed. Blisters and Scott's dressing with splint were afterwards applied, and the same medication adopted as in previous case.

11th April.—Little or no swelling visible, but the joint remained stiff. Massage ordered to be done twice a day. Gonorrhœa ceased.

1st June.—Movement slowly returning; walked with a decided limp. He was sent to convalescent home, and told to massage knee every day, Syr. fer. iodid. given internally. Three days later he was sent back to hospital because the pain had returned, and the joint had become slightly swollen. On readmission some thickening was observed to outer side of patella.

13th June.—Arthrotomy; 1 oz. of serum, mixed with synovial fluid, evacuated, and a piece of thickened synovial membrane snipped with a scissors and removed; irrigation and gauze drain inserted.

16th June.—Dressed; joint quite dry, and normal in contour.

23rd June.—Splint removed; active movement through a right angle.

26th June.—Allowed out of bed; walked with a slight limp; active movement increased.

12th July.—Discharged cured, with normal range of motion, no stiffness, pain, or swelling.

30th July.—Reported " that knee was as strong as ever."

Gonorrhœal Arthritis—Operation—Recovery.—A. R., aged 27, clerk, admitted on 21st July, 1897.

History.—Had two previous attacks of gonorrhœa, one in 1892 and the other 1894. On 1st July he acquired the disease for a third time, and tried to cure it by remaining in bed for a week; the day after getting up he felt pain in left knee, two days later the joint became swollen and slightly stiff; as these symptoms became more aggravated, and gonorrhœa reappeared, he entered hospital on above date.

On admission, right knee was found greatly distended with fluid, slightly flexed, muscles very rigid, little or no pain, except when movement was attempted; and profuse gonorrhœa was present. Blisters, Scott's dressing, and splint were applied, pot. iodid. and santal oil given internally, and urethral injections ordered every four hours.

25th July.—No diminution in swelling or rigidity.

26th July.—Arthrotomy; 5 oz. of serum evacuated, irrigation and drainage as in other cases.

29th July.—Dressed; joint normal in contour, active motion through half a right angle.

31st July.—Drain left out.

3rd August.—Allowed out of bed; active movement through a right angle.

13th August.—Normal movement restored, could walk and run without a limp.

14th August.—Discharged cured.

In conclusion, I wish to mention a few details in the method of operation. The incision must be large enough to admit the index finger, for lymph coagula fasten in the recesses of joints, and I have frequently noted that nothing short of digital shifting suffices to detach them. Needless to say, if such plastic stuff should be left behind, the operation would be robbed of half its value.

Irrigation should be always carried out—without it the toilet of the joint would be incomplete—my favourite injection being biniodide of mercury lotion, 1 in 5000. Care must be taken to leave the joint cavity dry; nothing effects this better than a long roll of gauze, which can be packed in in all directions, twisted about, and when removed many flocculi will be seen attached to it. Last, and by no means least, drainage must be provided for. My experience has taught me not to open a joint for any form of effusion unless I am prepared to drain it; the rest and relief of tension, as afforded by a few strands of gauze, are absolutely necessary in order to insure a good result.

It may not be considered extraneous to the subject of this paper if I mention that, in our most recent text-books of surgery, gonorrhœal arthritis is described as "a disease that commonly ends by stiffening the joints" (Treves); "the disease terminates in resolution, in ankylosis, or in destruction of the joint, most frequently by far in ankylosis (fibrous), either partial or complete, due to organisation of the plastic exudation, both articular and peri-articular" (Keen and White); and, furthermore, "unfortunately there is no remedy yet known which can be relied on" (Treves).

I am not surprised that the recognised indolent treatment of this affection gives such bad results, for it is absurd to suppose that blistering or rubbing can cure an infective arthritis.

The fact of the matter is this, when we meet with a decoction of staphylococci we rush to operate, but when we encounter a decoction of gonococci or rheumacocci we nostrumise, because we entertain some fears of merely opening and draining a non-purulent joint.

If the germ pill is worth swallowing, we had better not bite at it, but rather become consistent, by adopting some general surgical principle on which to treat germs, their products, and their fluids.

AN UNUSUAL CASE OF ZONA.

By W. A. MACKAY, M.B.,
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In view of recent references to cases of zona, the following account of a patient admitted to the City of Glasgow Fever Hospital, certified to be suffering from erysipelas, may be of interest.

Francis K., æt. 57, felt out of sorts on 9th January, 1897. During the following days he suffered from pain in the back of the neck, the left supraspinous fossa, and the inner end of the second left intercostal space in front, also pain and a burning sensation in the left ear. On the evening of the 12th, an eruption was noticed behind the ear, and the following morning patient was admitted to Belvidere Hospital.

On examination between 2 and 3 P.M. there was a well-marked herpes of the left side of the face and neck, the lower and inner limit being the sternum at the second intercostal space. In the evening the side of the scalp was found to be also affected. The ear was markedly swollen, and the skin over the manubrium sterni pitted deeply on pressure. Later a certain amount of sloughing took place. Evidently the superficial branches of the cervical plexus were the principal nerves affected. A single vesicle was noticed at the apex of the left deltoid muscle, while one or two vesicles were present on the right side of the back and neck. Numerous papules were present on the trunk, and several were noticed on the arms. During the afternoon many of these papules developed vesicles, like those of varicella, and during this and the following days a discrete rash, passing through the stages of papule, vesicle with clear and opaque contents, and crust, was observed on the trunk and limbs, vesicles being present as late as 17th January, and a few crusts on 1st February. The eruption on the limbs, while conforming generally in character to that on the trunk, did not pass through the stages so typically. One crust was discovered on the right side of the scalp.

The temperature in the early days of residence was febrile, 103·2° F. being registered on the first day. The urine contained a moderate quantity of albumen, but gave no reaction on boiling with Fehling's solution. No chest condition to account for the rise of temperature was discovered.

On the evening of 15th January, loss of power on the left side of the face was noticed, and during the next fortnight patient suffered from a Bell's paralysis of the left side. By the 1st February, on which day he passed from my observation, there was slight movement of the left side of the forehead. Unfortunately the electrical reactions could not be taken.

Patient had suffered from measles in childhood, and from variola in adolescence. There was no history of specific disease, and he denied seriatim sore throat, falling of hair, or skin condition, other than prickly heat.

Facial paralysis in association with zona is uncommon. According to a paper by Eichhorst, quoted in the *British Medical Journal Epitome* for 12th June, 1897, the herpes generally precedes the paralysis should the lesions be associated. Cases of zona affecting simultaneously areas on the two sides of the body are reported by Mr. Hutchinson and Von Bärensprung,[1] also by Mr. Eccles.[2] Varicella in a man of this age is very rare, but not unknown.

CURRENT TOPICS.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS, MOSCOW, 1897.—The Moscow Congress was in all respects a great success, both from the professional and the social point of view. In spite of the tremendous heat which prevailed, and of the countless attractions of the ancient city itself, the work of the various sections was steadily proceeded with, and most of the sectional programmes were fully carried through. We were unable to learn that any startling discovery in pathology or therapeutics was announced to the world at the Moscow meeting, but we have no doubt that the forthcoming *Transactions* will contain a large store of valuable and lasting work. On the social side it may be said that hospitality—hearty, unstinted, magnificent even—was the keynote of the twelfth Congress. Government officials and civilians alike united most cordially with the doctors of Russia in making the strangers welcome and at home. Travelling was made easy for the members, not only by a free pass over the railways to and from the frontier, but also by allowing the travellers' luggage to pass the frontier without inspection by the customs' officials. At all the railway stations of Moscow, for several days before and after the opening of the Congress, there were reception committees, composed of doctors and students, who met the members on their arrival, spoke to them in their own tongues, and despatched them in safety to their hotels or lodgings, and all this in a cordial brotherly way, which, in a city whose signboards were quite meaningless to the majority, aroused the liveliest feelings of gratitude in the traveller's breast. The offices and general rendezvous of the Congress were situated in a large building called the Manège, said to be the largest drill-hall in Europe. Opposite to this huge edifice, towards the west, were the University buildings, and to the east of it lay the Kremlin, with all its historic interest, both within a few minutes' walk.

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[1] Hilton Fagge, *Practice of Medicine*, third edition, vol. ii, p. 938.

[2] *British Medical Journal*, 2nd January, 1897.

Between the hours of twelve and two no work was done, and luncheon *a la fourchette* was served free to the members. Then the Manège was at its busiest, friends meeting friends to arrange excursions, to discuss professional matters, or to quench the overpowering thirst, engendered by the blazing sun and dry air of the Muscovite capital, in copious draughts of free beer. The morning's business over, in five minutes the stranger could be meditating over the vanity of human life amidst the barbaric splendour of the cathedrals of the Kremlin, or, from the lofty belfry of the tower of Ivan the Terrible, looking down upon the city, with all its gorgeous colouring of green, and brown, and white, and gold, glittering in the sunlight, and merging into the more sombre tints of the vast surrounding plain.

The general meetings of the Congress were held in the grand Imperial Theatre, and to the first of these entrance was obtained by special ticket, as only about 2,000 could be accommodated. The session was formally opened on the 19th August, in the presence of the Grand Duke Sergius, the inaugural address being delivered by Professor Sklifossowsky, the President. After this the reception of the representatives of different countries was proceeded with, when an incident occurred which almost led to our townsman, Professor Wm. Macewen, having to speak for Great Britain, When the representative for England was called for, Sir Wm. MacCormac was not in his place, and, on the call of the President, Professor Macewen had commenced to address his Imperial Highness. At this moment, however, the stately figure of Sir William MacCormac was seen slowly advancing up the platform, and Professor Macewen gracefully gave way. The sectional meetings were held in various places, in the University, in the Salles de Noblesse, and in the University cliniques, and as the sections were thus somewhat widely scattered, the idea of having a common meeting-place in the Manège was an excellent one. The interior of this huge drill-hall was arranged and decorated something after the manner of a fancy fair. At one end was a large paying restaurant, at the other a free restaurant, open between 12 and 2, when the scene it presented baffled description. About midway between these two places of refreshment were the general bureau and the post office, whilst the remaining space was occupied by smaller areas partitioned off as meeting-places for different nationalities and sections represented at the Congress.

The Ladies' Committee were accommodated in the medical club house of Moscow, and the arrangements made for the lady visitors were of the most complete kind. A special little handbook was published for their use, and daily excursions were made under competent guides to all the places of interest.

Fêtes, balls, fraternal reunions, and open-air concerts made the evenings pass quickly for the members of the Congress, and the Moscow festivities were brought to an end by the garden party given by the Grand Duke Sergius and the Grand Duchess Feodorowna.

Those who returned by St. Petersburg enjoyed a further series of festivities, the chief of which was the Imperial reception given at the Palace of Peterhof, to which the guests were conveyed on board the Imperial yachts. On arriving at the Czar's private landing-stage the 600 guests had the option of walking or driving to the palace. Most preferred to walk in order that they might enjoy the view of the great fountains in front of the palace, all of which were playing in full force. Arrived at the Imperial residence, its magnificent suites of rooms were inspected, and then luncheon was eaten in the grand dining-hall and the ballroom. The afternoon was spent in driving through the grounds in the Imperial carriages, St. Petersburg being reached again about 5 or 6 o'clock in the evening.

Glasgow and the West of Scotland sent a large number of representatives to the Congress. From Glasgow we observed Professor Wm. Macewen, Professor Murdoch Cameron, Dr. Alexander Robertson, Dr. A. Wood Smith, Dr. Robert Pollock, Dr. David Yellowlees, Dr. Swanson, Dr. Erskine, Dr. Campbell Black, Dr. W. K. Hunter, Dr. Hinshelwood, Dr. Arthur Hutchieson, Dr. John Adams, Dr. James Craig, Dr. David Newman, Dr. J. Lindsay Steven, and Dr. John Barr; from

Helensburgh, Dr. J. Ewing Hunter; from Kilmarnock, Dr. Frew; and from Paisley, Dr. Duncan. His fellow-townsmen were gratified to see the honour which was paid to Professor Macewen. Everywhere he was recognised as one of the leaders of the Congress, and he enjoyed the distinction of being one of those who was specially presented to the Grand Duke and Duchess at Moscow.

GLASGOW ROYAL INFIRMARY: DEMONSTRATIONS TO PRACTITIONERS.—The weekly demonstrations on clinical medicine and surgery to practitioners, which were inaugurated last winter at the "Royal," and which we have reason to know were much appreciated, will be resumed for the coming winter on the first Friday of October. A demonstration will be given each Friday throughout the winter in the wards of one of the physicians or surgeons from 4 to 6 o'clock. All medical practitioners are invited to be present.

WESTERN INFIRMARY.—Dr. Gavin P. Tennant has resigned his office as physician to the Infirmary. We understand that the Directors will not reappoint a physician as his successor, their intention being to elect an additional surgeon. We believe that some rearrangement of the wards is also to take place, with a view to providing greater accommodation for the gynæcological clinique.

THE CITY OF GLASGOW SMALL-POX HOSPITAL, BELVIDERE.—At the request of the Corporation the Visiting Physician of the Small-pox Hospital has agreed to give clinical demonstrations of small-pox to medical practitioners. The hour of visit is 4 P.M. Medical gentlemen who present their cards and satisfy the Physician that they have been revaccinated, and who otherwise adopt such precautions as he may prescribe, will be taken round the cases.

We think this an excellent move on the part of the Corporation, and we trust that the opportunity thus afforded them will be fully taken advantage of by the practitioners of Glasgow.

REVIEWS.

A System of Medicine by Many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., &c., Regius Professor of Physic in the University of Cambridge, &c. Vols. II and III. London: Macmillan & Co., Limited. 1897.

WE regret that pressure upon our pages has prevented us noticing the second volume of Allbutt's *System* at an earlier date. It is impossible in the limits at our command to give the space which an appropriate review of a great work of this kind requires. From our notice of the first volume some idea of the scope and purpose of the undertaking would be obtained; so that, meantime, we at once proceed to notice briefly the contents of the present volume. The great sectional divisions of the book have the following titles, which will sufficiently indicate the subject matter:—(1) Infective Diseases of Chronic Course; (2) Diseases of Uncertain Bacteriology—(*a*) not Endemic, (*b*) Topical or Endemic; (3) Infective Diseases Communicable to Man from Animals—(*a*) of Certain Bacteriology, (*b*) of Uncertain Bacteriology; (4) Diseases due to Protozoa; (5) Intoxications; (6) Internal Parasites; (7) Addenda, containing the Serum Diagnosis of Typhoid Fever, and supplements to the articles on Plague and Yellow Fever. The list which we have just given is an indication of the huge field now covered by the term practice of medicine, and a proof, convincing and even startling, that it is no longer possible for a single author to accomplish a system of medicine. In the same way it is also impossible for a single reviewer to criticise with equal value and acumen all the parts of a huge system like the present. It must rather be his task to state his opinion of how the work, as a whole, has been done, selecting for more detailed notice a few of the articles. All the articles show evidence of care and labour in their preparation, and, as befits a great work of reference, detail, statistical and other, with copious bibliographies, is everywhere introduced. As far also as we have been able to judge on looking through the volume, the proportion between subject matter and space allotted to its consideration has been very well maintained. The longest article in the book;

occupying about one hundred and thirty pages, is that on "Vaccinia," divided into three parts—Clinical Study of, by Dr. T. D. Acland; Pathology of, by Dr. S. M. Copeman; and Vaccination as a Branch of Preventive Medicine, by Mr. Ernest Hart. This was the article which, waiting for the publication of the Commission's report, led to some delay in the appearance of the volume. No doubt, the Royal Commission, the centenary of Jenner, and the persistence of the antivaccinators have all contributed to specially direct the attention of the profession to this subject, and doubtless, also, we can explain the prominence given to it in this volume in the same way. What will be the professional and public opinion with reference to vaccination in another hundred years it is impossible to foretell, but from the article on vaccination now under notice it is evident that the upholders of the practice—*i.e.*, practically the entire profession—cannot afford to be negligent in reference to the work of the antivaccinators. Of the mitigating influence of vaccination there can be no doubt, and the Sheffield statistics prove this. But the Sheffield epidemic of 1887-88 also proves that a widespread epidemic of small-pox, with 300 new cases per week, can break out in a town vaccinated to 98 per cent of its inhabitants. It shows that vaccination or no vaccination is not the *whole* controlling influence in the prevalence or non-prevalence of epidemic small-pox. The clinical study of Dr. Acland on "Vaccinia" is, in our opinion, the *beau ideal* of what such a study should be—well balanced, exhaustive, and strictly impartial. While it is quite obvious in what direction the sympathies of the author lie, no fact or argument for or against is suppressed; indeed, the whole tone of the monograph, for it is nothing less, is as impartial as if it had been a deliverance from the judicial bench. The Pathology of Vaccinia has been ably treated by Dr. Copeman.

The articles on Tuberculosis (Dr. Sydney Martin), on Leprosy (Dr. Abraham), and on Actinomycosis (Dr. Acland) are all exhaustive, but call for no special comment. They are such as might have been written by any competent observer. On the ordinary specific fevers it is difficult to say anything new, and we have always a feeling of sympathy for the gentlemen called upon to supply the articles on these subjects. It is generally possible to fill in a few new statistical tables, or to relate what has been done or not been done in reference to the bacteriology of the disease or its serum treatment, but the great outstanding familiar features of these diseases need no lengthy description. This has all been done, and well done, long ago. We think, indeed, that space might have been profitably saved on this part of the work. Of course, the requirements of the student must be borne in mind, but, on the other hand, this book will be little read by students, excepting, perhaps, those reading for honours.

We notice two articles on Dysentery, one under the heading of Uncertain Bacteriology, by Dr. Davidson, and a second on Amœbic Dysentery, under the heading of Diseases due to Protozoa, by Dr. Lafleur. We cannot help thinking that this subdivision is somewhat unfortunate, although, no doubt, the strictly scientific mode of classification followed throughout this *System* perhaps demanded such a separation. Nevertheless, we hardly think that we are yet in a position rigidly to classify Amœbic Dysentery as a separate entity, and it would have been less likely to lead to confusion in the present transition stage of nosology had both forms of the disease been considered under one heading. Both articles are well done and comprehensive. With the work of the writers we have no fault to find. The article on Malaria is from the pen of Dr. William Osler. The sections on Grain Poisoning, Mushroom Poisoning, and Opium Poisoning are by the editor. The sections on the Internal Parasites are unusually full and well illustrated.

Volume III contains the articles on (1) General Diseases of Obscure Causation; (2) Diseases of Alimentation and Excretion; (3) Diseases of the Stomach; (4) Diseases of the Peritoneum; and (5) Diseases of the Bowels. In this volume the editor undertakes the articles on Mountain Sickness, Neurosis of the Stomach, and Dilatation of the Stomach, subjects on which his previous writings have made him a well-known authority. Other well known authors who contribute are Dr. Cheadle, Dr. Howship Dickenson, Dr. Lauder Brunton, and Mr. Frederick Treves. There is only one remark of a critical nature that we will make in reference to this volume. It is this—the articles on Osteitis Deformans, Acromegaly, and Hypertrophic Pulmonary Osteo-arthropathy are altogether inefficient, and quite unworthy, in our opinion, of a place in a system of medicine such as the present. They seem to us to be more suited for an elementary text-book.

We again take the opportunity of most cordially recommending this great work. It is a worthy successor of Russell Reynold's classical *System*.

Lectures on the Action of Medicines. By T. LAUDER BRUNTON, M.D., D.Sc. Edin., LL.D. (Hon.) Aberd., Physician and Lecturer on Pharmacology and Therapeutics to St. Bartholomew's Hospital, &c. London: Macmillan & Co., Ltd. 1897.

WE had lately under review in this *Journal* an excellent series of lectures on pharmacology by Binz, translated by the New Sydenham Society. We have now before us another series of lectures on the same subject by Lauder Brunton, but treated in a different manner. In this subject there are two possible ways of dealing with medicines—first, by taking the various organs of the body and considering how their functions in health and disease may be modified by different medicines; second, by taking the different medicines individually and discussing their action on the many organs of the body, because a medicine seldom acts on one part of the body alone.

Now, Lauder Brunton has adopted mainly the first method, though he shows that if we keep to one method alone we will get a very one-sided view of the subject. It is only in the last five lectures he adopts the second method in reviewing the several actions of many medicines. Binz, on the other hand, adopts the second method throughout, grouping, however, many medicines together according to their chief action.

The interest of Lauder Brunton's work lies largely in adopting the arrangement whereby he passes in review the various functions of the body, indicating how these may be influenced in health and disease. These lectures being on the action of medicines, there is no introduction of matter belonging purely to the domain of materia medica proper. They will therefore, we think, prove even of more interest to the general practitioner than to the student, whose knowledge of general medicine is so much more limited. The student, as Lauder Brunton indicates, must not depend on such a course of lectures to furnish him with all the needful material for examination purposes. He must go for that to more systematic works, as well as obtain a practical knowledge of medicines and their preparations in the laboratory. But while that is so, the author very rightly protests against what was expected of a student in materia medica, and in some quarters still is. "This used," he says, "to be a great burden to the memories of students, and it is part of the subject which I have been trying as far as I possibly could, ever since I became a lecturer in materia medica, to abolish, because I consider it of no practical importance."

In these lectures, therefore, all he wishes to accomplish is "to awaken the attention of the student, to excite his interest, and impress upon him certain points which will form a nucleus for his knowledge, and around which he may afterwards group more information."

Those of our readers who are familiar with Lauder Brunton's *Text-book of Pharmacology, Therapeutics, and Materia Medica* will recognise much of the material in these lectures as being the same as in this text-book, but in the lecture form it is more interesting, and much is new.

For example, we have in Lecture III an interesting discussion on internal secretion, toxins and antitoxins, venins and antivenins, a reference being made to the work of Prof. Fraser, of Edinburgh.

Again, we note that he gives the full weight of his authority in favour of the treatment of cardiac disease by massage and rest, Schott's method and Oertel's method, the method adopted, of course, depending on the nature of the case. Now, with regard to these methods of treatment, few will differ about the efficacy of the first. With regard to Schott's method, a good deal of doubt has been expressed in many quarters about the results obtained. Lauder Brunton, however, gives his personal testimony to the great advantage certain of his patients have derived from this mode of treatment, and it is quite possible that better results may be gained from it than has been generally admitted in this country. It is quite possible that the disfavour with which this treatment is often regarded is due to an imperfect knowledge of the system and to its having been carried out in a very imperfect manner. The efficacy of Oertel's method is not fully discussed.

Another interesting topic is on the administration of oxygen in pulmonary disorders. This is administered to patients often in a very indiscriminate manner, and therefore often with disappointing results. We will find here, however, an indication of the kind of cases which are likely to derive benefit from its administration. Thus, while it is of little or no use in bronchitis with much secretion, it is invaluable in pneumonia. In the first case the accumulated secretion prevents the oxygen reaching the alveoli; in the second case it is often very different. One lung may be intact, and by it the oxygen may be readily transmitted to the blood. By supplying it freely the work to be done by that lung is much diminished, and the blood is more thoroughly oxygenated. It is often, however, of inestimable value when the second lung becomes involved while the first has only partially recovered, during which time there is danger of asphyxia gradually taking place.

Many practical hints are given as to the method of administering oxygen. Brunton makes also the suggestion that one might readily make use of oxygen for keeping up artificial respiration, and has devised an apparatus for the purpose, though he has not yet had an opportunity of testing its efficacy.

With regard to the use of animal organs and extracts in the treatment of disease, Brunton acknowledges that, while many have been employed, only the thyroid in the treatment of myœdema has been a success. Partial success has, however, attended the use of suprarenal capsule in the treatment of Addison's disease, and of bone marrow in the treatment of pernicious anæmia, and there is still also some ground for hope that certain cases of diabetes may respond more effectively to the use of pancreas. "It is supposed that the pancreas not only pours a digestive juice into the duodenum, but pours out into the lymphatics a secretion which contains a glycolytic ferment. . . . It has been supposed that the want of this glycolytic ferment is the cause of glycosuria in many cases." On this theory pancreas has been used in the treatment of certain forms of diabetes; at present Brunton is trying the efficacy of tablets of pancreas containing a large quantity of a glycolytic ferment, which he hopes may prove of some use in burning up the sugar for the wants of the body, instead of allowing it to run to waste.

We have enjoyed and gained much knowlege from the perusal of this volume, and we gladly recommend it to the use of senior students and practitioners. It well published, and the pages are freely illustrated with diagrams.

Lectures on Pharmacology for Practitioners and Students. By Dr. C. Binz. Translated from the second German Edition, by Peter W. Latham, M.A., M.D. Vol. II. London: The New Sydenham Society. 1897.

In the January number of the *Glasgow Medical Journal* of this year (pp. 59, 60) we reviewed the first volume of this excellent series of Lectures on Pharmacology, translated by Arthur C. Latham, M.A., M.B. Oxon. We are now in possession of the second volume, though not by the same translator.

The experimental work of the pharmacologist is year by year becoming of more value to the medical practitioner.

Much, of course, has been done in this department which may never reach the ordinary physician; but in these lectures we will find, as we have pointed out before, how the scientific aspect of the action of medicines may be discussed from a utilitarian point of view. We have, in fact, the practical application of the experimental work of the pharmacologist to the requirements of the thoughtful physician.

Thus, if we look at the discussion of the action of chlorate of potassium, we will find an explanation of how it acts in septic inflammatory conditions of the mouth. Binz shows by experiment how decomposing fibrin so acts on the chlorate of potassium that the reaction for chloric acid obtained at the beginning of the experiment gradually disappears. So he explains that when chlorate of potassium comes in contact with septic matter it is decomposed, being reduced to the chloride and being made to yield oxygen. In the nascent state the latter acts as a stimulant to the tissues after the manner of a gentle irritant like a dilute solution of nitrate of silver. This is not the usual explanation of the action of chlorate potassium in such conditions, but the example will serve to show how the action of medicines is explained on a scientific basis.

A large portion of this volume is devoted to inorganic substances, such as iron, lead, mercury, bismuth, phosphorus, and arsenic, but many organic compounds are also dealt with, considerable attention being given to the class of antipyretics, including those most recently introduced.

One of the most interesting articles is that on quinine, especially in reference to its introduction into medicine, its action in malarial poisoning, and its action in those febrile conditions associated with purulent exudations and an inflammatory leucocytosis of the blood. In discussing the latter subjects, the writer shows a distinct connection between the action of quinine on such low forms of life as fresh water amœbæ, the malarial parasite, and the white blood-cells.

In these cases quinine may be made to lessen or destroy their activity. The explanation of the action of quinine in malarial poisoning is evident, while its beneficial action in febrile conditions, associated with purulent exudations and an inflammatory leucocytosis of the blood, he explains as being due to the influence of the quinine in the white blood-cells. His views, he states, are not at variance with Metschnikoff's theory of phagocytosis, because in reference to such conditions that theory has not been proved true, and is extremely improbable.

In regard to the administration of quinine, he believes that the sulphate, on account of its insolubility, should be altogether discarded in favour of hydrochlorate. "Nothing," he says, "but the *vis inertiæ* of the medical profession has allowed it to retain a place in the pharmacopœia."

Another interesting article is that in which the action of salicylate of sodium is discussed, particularly in reference to its use in acute rheumatism. By some experiments which he details, Binz shows that the probable action of this salt depends on the liberation of salicylic acid through the agency of the increased tension of carbonic acid in the inflamed joints. The salicylic acid acts as a powerful antizymotic agent; hence its influence in acute rheumatism. He refers, also, to the curious fact pointed out by the translator, in a paper published in 1895, that it is only after the rheumatic poison has been neutralised, and its further production stopped, that the physiological action—that is, the effect it produces in the healthy organism—shows itself; this effect being produced by the excess of the remedy employed.

The above observations will show, to some extent, the character of the book, which we would highly recommend to those interested in the subject.

The book has been carefully translated, and we presume that, like the first volume, it has passed through the hands of Dr. Binz before publication.

Manual of Bacteriology. By ROBERT MUIR, M.A., M.D., F.R.C.P. Ed., Lecturer on Pathological Bacteriology, and Senior Assistant to the Professor of Pathology, University of Edinburgh; and JAMES RITCHIE, M.A., M.D., B.Sc., Lecturer in Pathology, University of Oxford. Edinburgh and London: Young J. Pentland. 1897.

NO better book on bacteriology has yet, we think, been written for students than the one under review. We do not infer that it is the best text-book on the subject, but such works as those of Sternberg, Klein, and Crookshanks are better suited for those who have completed a course of practical bacteriology. In this manual, the authors, after describing minutely the general morphology, the method of cultivation, the microscopic method, and the relations of bacteria to disease, go on to describe the different pathogenic germs. These are described with a minuteness that we have not seen equalled. For instance, in describing anthrax the authors treat the subject under the following subdivisions:—Introductory, Historical Summary, Description of the Bacillus and of its Cultures, the Biology of the Bacillus, Anthrax in Animals, Anthrax in the Human Subject, the Pathology of Anthrax, the Toxines of the Bacillus, the Spread of the Disease in Nature, the Disposal of Carcases of Animals dead of Anthrax, the Immunisation of Animals against the Disease, Serum Anticharbonneux, and the Methods of Examination. This example is sufficient to show that the descriptions are thorough and up-to-date. Throughout the work the authors avoid all speculations, clear distinction being drawn between what is proved and what is only probable, and they have thus produced a work as trustworthy as it is scientific. There is a well-written chapter on immunity, and in an appendix, small-pox, hydrophobia, malarial fever, and dysentery are fully treated. There are over one hundred illustrations, the majority of which are photographs and photo-micrographs. In a work meant for students, we should have liked to have seen, for the purposes of comparison and differential diagnosis, short descriptions of the most common non-pathogenic germs, but in spite of this omission, we can heartily recommend the manual as a clearly written reliable guide to the study of bacteriology.

Aphasia and the Cerebral Speech Mechanism. By WILLIAM ELDER, M.D., F.R.C.P. Ed. With Illustrations. London: H. K. Lewis. 1897.

THIS work is to a large extent a reproduction of the author's thesis for the degree of M.D. in Edinburgh University. Special attention is paid to the localisation of the lesion in the different clinical varieties of aphasia, and numerous cases are adduced by way of illustration.

After a historical introduction, the author goes on to consider the subject of "the reception, retention, and production of speech," and thereafter of the "routes" concerned in the speech mechanism. A chapter follows on the "mechanism of speech, as shown by its disorganisation," and then we have a series of chapters on the clinical varieties of aphasia, including auditory, conduction, and visual aphasia, aphemia, agraphia, and amusia. The last chapter treats of aphasia from a surgical point of view, and is followed by a bibliography of papers and treatises referred to and by an index.

Dr. Elder has obviously studied his subject with great care, but his language is not invariably such as would make his meaning plain to the uninitiated. For instance, he speaks in one place of the external geniculate and anterior quadrigeminal bodies and the optic thalamus as "the first centres on the visual route" (p. 23); and a little later (p. 26) he refers to the "primary visual centre" as situated in the cortex of the occipital lobe. The following sentence needs some study before its meaning becomes obvious:—"In speaking, the production route I suppose to be A B C D and AA_1 B_1 C_1 D_1" (p. 40). The expression "a case much similar" (p. 34) is perhaps a slip. The historical sketch is not all that might be desired, and it is unfortunate that the author should attempt to make a distinction between "hemianopia" and "hemianopsia." Division of the left optic tract causes, he says, left lateral "hemianopia" (blindness of the left half of each retina), or right lateral hemianopsia (blindness in the right half of each visual field). Such a distinction is not in accordance with general usage; no notice of it is taken in the authoritative lexicon of the New Sydenham Society, and any serious attempt to perpetuate it would lead to the most terrible confusion.

On the whole, Dr. Elder deserves credit for the trouble he has taken with his subject, and if a study of this book leads other observers to record in full such details of aphasic cases as will increase our certainty in the localisation of cerebral lesions, his work will not have been in vain.

The Insane Poor in Private Dwellings and Licensed Houses. By J. F. SUTHERLAND, M.D. Edinburgh: E. & S. Livingstone. 1897.

THE system of accommodating the insane poor in private dwellings is one which has always found greater favour in Scotland than elsewhere in the kingdom, but even in Scotland it has not always been so much in favour as it has been during the past sixteen years. Alike in England and Scotland, from 1859 to 1880, there was a steady decrease in the numbers so provided for, until in England the percentage had fallen from 18 to 9, and in Scotland from 38 to 17. But at this point of time a very marked change becomes noticeable, for whereas in England the same movement continues unabated, until now the proportion stands at 6·8, in Scotland it has risen to 23.

It is quite safe to say that the change of policy in Scotland, which makes itself manifest first in 1881, was one which originated, not with the local authorities, but with the Board of Commissioners in Edinburgh; and that it is justified in claiming that by this means a very large pecuniary saving has been effected, admits of no possible doubt.

The question is, has this saving been effected without materially prejudicing the interests of the poor lunatic? The exponents of the system most emphatically affirm that this is so, and, if any criticism at all adverse to it is by any possibility ventured upon, it is liable to be stigmatised as "ill-informed, puerile, and inconsequent."

The advantages of the system are all admitted, but is any good likely to follow from attempts to minimise the disadvantages inseparable from such a method of disposing of the insane? We have not been able to satisfy ourselves that these disadvantages are either inconsiderable or unreal. From Dr. Sutherland's remarks, one would be led to infer that occurrences short of murder are not to be regarded as untoward, as murder is, he says, the only one to be classed as such that has taken place during the past forty years. One of the recognised risks attaching to this system is that of sexual "misadventure." During the past eight years four insane women boarded in private dwellings have become mothers of illegitimate children, and that this represents the extent of possible sexual irregularity is open to doubt. It does not mend matters to say that these regrettable occurrences are not unknown inside asylums, though on what authority this statement is based we do not know.

There is one other disadvantage which, we believe, amounts in not a few instances to a very real and keenly felt grievance, and that is the separation by long distances of the patients and their friends.

The advantages of this system of making provision for a certain portion of the country's lunacy are neither few nor unimportant, but it is just possible that the interests of the insane poor might be outweighed by other considerations, the pecuniary, perhaps, most of all.

The Swedish System of Physical Education. By THEODORA JOHNSON. Bristol: John Wright & Co. 1897.

THE author of this manual is the Principal of the Swedish Institute, Clifton, Bristol, and writes with some practical knowledge of the subject.

The book is based on a paper read at the annual meeting of the British Medical Association, held in Bristol in 1894.

It is not suited for those who wish to practise the art, but rather for those who desire a short account of the history and scope of the Swedish system of physical education as practised by Ling in the Royal Central Institute for Gymnastics in Stockholm.

The system has four branches—(1) Educational; (2) medical; (3) military; and (4) æsthetic. It is only, however, with the first two branches that the writer deals. In discussing the first, she advances a strong plea for the wider recognition of this form of physical training as carried out by those who have really studied and been trained in the art.

Very properly the author resents, in dealing with the medical branch of the subject, the system of massage being degraded to mere "shampooing" and rubbing," as practised by those who have been untrained; and she asks for the proper registration of all establishments where massage may be carried out by skilled operators under the direction of the medical adviser.

A special chapter has been devoted to the treatment of lateral curvature of the spine by systematic exercise and massage.

The book is well written, simply but graphically illustrated, and is a credit to the publishers.

Problems of Nature: Researches and Discoveries of Gustav Jaeger, M.D., Selected from his Published Writings. Edited and Translated by HENRY G. SCHLICHTER, D.Sc. London: Williams & Norgate. 1897.

THE subjects treated in the thirty-two short essays which bear the above title are among the most interesting and fundamental problems of biology and medicine. The author belongs to the modern materialistic school of biology, and his views in many instances possess considerable originality. He is, however, frequently over-confident of the truth of his conclusions. His style is concise and clear, and he has considerable ability in rendering easily intelligible subjects which are themselves involved and unfamiliar. These essays are an important accession to philosophic biology and medical literature, as they illustrate and enforce the importance, in both these branches of science, of the deductive rather than the inductive method of reasoning. Dr. Jaeger adopts the Darwinian doctrine of natural and sexual selection, and as one of the essays antedates the *Origin of Species*, the influence of this doctrine may easily be observed in his subsequent writings. And on this account it is as well to read this essay at the beginning instead of at the end of the first group of essays, where the translator has placed it. The essays themselves are arranged into three groups. The first group deals with general biological problems, such as the origin and fundamental laws of life, inheritance, and the nature of the animal soul. The next group deals with topics more nearly related to medicine, such as the specific gravity of the body as an index of the state of health of the individual, the cause of immunity or liability to infectious disease, the benefit of training and exercise to health, and a like result from variations in the mode of living. Four miscellaneous essays constitute the last group. The first and last of these, written at a somewhat later period than any of the others, may well be compared with essays on kindred subjects written earlier, as showing the sequence and development of the author's thoughts. By way of advertisement, also, Dr. Jaeger has allowed to be placed at the beginning of the book a *fac simile* of a letter to him from Darwin; and it is curious that he ventures to assume that a complimentary epistle is necessarily also a critical dictum.

In the earliest essay the value and significance of the typical difference between the radiata and bilateral forms of life is discussed. "I came to the conclusion," he says, "that these types are fundamentally different." Jaeger then contends that since there is a fundamental mathematical distinction between these forms of animals, they cannot be genetically connected; and he, therefore, demurs from the opinion that an "uninterrupted connection" exists between all animal forms. Yet, curiously enough, in alluding to the tunicata, he he says, "I believe them to form a connecting link between the monaxial and diaxial animals." He is under the influence of mathematics at one time, and of Lamarck at another. Nevertheless, it must be remarked that he discriminates in the main between the primary types and relationships of animals, as is now done. In regard to the origin of life, he is an advocate of the doctrine of a-biogenesis. Accepting, as is universally done, the assumption that the conditions on earth were incompatible with the existence of living beings, he advocates the notion that life originated independently at various times and places subsequently to the cooling of the globe to the necessary temperature. This theory, therefore, renders probable the existence of several independent phyla. He says—"The starting point for all organic life upon our planet, whether animal or vegetable, was an aqueous solution of ammonia carbonate." He asserts that living beings may be constructed out of chemical compounds *absolutely dead;* that it is a problem for synthetic chemistry; and he adds, "but after the splendid discoveries of Würtz and Berthelot in this direction, its solution can only be a question of time." In consonance with this doctrine, he says, "I regard the animal soul as a distinct chemical substance, subject to the changes of matter, like all other constituents of the animal body." It must, however, be freely admitted that if the assumptions of physicists are true, and unless we call in some supernatural mode of biogenesis, some such theory of life as is advocated by the materialists, from the time of the early Greeks till now, must be accepted. Throughout the whole volume Dr. Jaeger shows a disposition to accept as true the most advanced scientific ideas, and he also shows but little constraint in making obvious logical deductions therefrom, which, indeed, is an admirable faculty. Those, therefore, whose ideas are in sympathy with modern scientific thought will find themselves in these essays carried further forward in the direction in which they are inclined to go.

The Life and Times of Thomas Wakley, Founder and First Editor of the "Lancet;" Member of Parliament for Finsbury; and Coroner for West Middlesex. By S. Squire Sprigge, M.B. Cantab. With Two Portraits. London: Longmans, Green & Co. 1897.

This is a somewhat wearisome, because inordinately long-drawn out, biography of a most interesting life. Amidst the abundance of uninteresting detail the outlines of the central figure are often lost, and a distinct effort is frequently required to remember what manner of man the subject of the memoir was. We are never allowed to forget, however, that the biography is one of a reformer, and very often the history of reformers is melancholy reading. Wakley was an ideal medical reformer, combative, tenacious of purpose, unsparing, and perhaps a little unscrupulous, as it appears to us, in his methods. He was not a reformer of the highest type; few medical reformers are. On the whole, we have been able to note little of selfsacrifice in all his battles. We are far from denying that much good to the medical profession resulted from Wakley's struggles, but it is always difficult to see him in any other light than that of a man like "Hal of the Wynd," fighting for his own hand, extending the prosperity of his journal, or spending money to be elected a coroner. No doubt he 'pegged away,' and we most freely admit that he was sincere and honest in his purpose, but, in our opinion, a man who spends a great portion of his life in the law courts as a principal in actions of libel is not a man of the highest aims and of the greatest refinement. Wakley was a successful journalist and medical reformer, and when we have said that we have said all that need be said about him. The interminable details of his battles in the law courts, of his quarrels at the College of Surgeons, and of his speeches on forgotten questions in the House of Commons become wearisome. Of great broad human sympathy, of matter interesting to humanity in general and not merely to the medical politician, there is comparatively little in the volume before us. Hence, as a literary production, the book would have been greatly enhanced in value by being curtailed to about half its bulk. We would have obtained as good a picture of the man, and we would have been spared the irritability induced by the wearisome record of continual squabbles, characterised by the bitterest personal feeling, and far better forgotten for ever. We do not think there are many readers who will peruse the book from beginning to end, but we can promise a few good half-hours of interesting reading on the political history of medicine in the earlier part of the century to any who will dip occasionally into its pages.

Diseases of the Liver, Gall-Bladder, and Biliary System: their Pathology, Diagnosis, and Surgical Treatment. By H. J. Waring, M.S., B.Sc. Lond., F.R.C.S. Edinburgh and London: Young J. Pentland. 1897.

This volume, which is a revised version of the Jacksonian Prize Essay of the Royal College of Surgeons of England for 1894, is an admirable piece of work, and reflects great credit upon its author. It treats of the liver and accessory parts from almost every point of view, and will be found of interest and value to the pathologist and the physician, as well as to the surgeon. Where the standard throughout is so high as it is in this book, the reviewer's task is easy; he needs but to praise the whole work.

The Natural and Artificial Methods of Feeding Infants and Young Children. By EDMUND CAUTLEY, M.D. Cantab. London: J. & A. Churchill. 1897.

Septic Conditions of the Infantile Alimentary Canal and their Treatment. By F. W. FORBES ROSS, M.D. London: The Rebman Publishing Company. 1897.

The Disorders of Digestion in Infancy and Childhood. By W. SOLTAU FENWICK, M.D. Lond. With Illustrations. London: H. K. Lewis. 1897.

THE three works just named give evidence that at present the subject of pediatric medicine is receiving due attention from English authors. The special branch of it covered by these three treatises is of the very greatest importance. Any physician with experience of a children's clinique will readily admit that a very large proportion of the patients he sees are suffering from disorders of the digestive organs. He also knows how hopeless many of these cases are, not only from the difficulties surrounding gastro-intestinal pathology and dietetics in the very young, but also from the ignorance of parents and guardians of everything pertaining to the proper feeding of children and infants. After all, it is only experience that ultimately enables the practitioner to cope with such difficulties; but, at the same time, he gratefully welcomes any published work likely to be of service in this difficult part of his duty. Each of the works now before us is likely to be of assistance to the practitioner in search of help in the dietetic treatment of infancy and childhood. They have been written by physicians having abundant opportunities of observing the affections of which they treat, and the methods of feeding which they describe. Dr. Cautley's work is almost entirely dietetic in aim, and his descriptions are most full and accurate in detail. We can most cordially recommend the work. In his appendices we find useful formulæ for preparing infants' foods, and also the directions given to mothers at the Belgrave Children's Hospital.

Dr. Forbes Ross has produced a most interesting and, in some respects, an original work which, inasmuch as it gives a working hypothesis, affords the practitioner something that he can lay hold of as a reason for the practice he employs. The keynote of the book is that the basis of mostly all the functional disorders of the alimentary canal in infants is septic, and that rational treatment consists in correcting this.

No doubt a good deal can be said for the position taken up by the author.

Dr. Soltau Fenwick's book is more like the ordinary systematic medical treatise—not very original, and more suitable to the student, perhaps, than the practitioner, but well and carefully done.

A Manual of Practical Medical Electricity. By DAWSON TURNER, B.A., M.D., F.R.C.P. Ed., M.R.C.P. Lond. Second Edition. With Chapters on Röntgen Rays. London: Baillière, Tindall & Cox. 1897.

IT is with genuine satisfaction that we call attention to the new edition of this excellent manual. The book is designed to meet the requirements of those who wish to employ electricity in the diagnosis and treatment of disease not only successfully, but also intelligently, and who yet desire to wander as little as possible in the domains of physics and mathematics. The original work has been revised, and is now illustrated by 127 figures, while two chapters and 23 figures have been added to deal with the subject of the *x* rays.

Excretory Irritation and the Action of Certain Internal Remedies on the Skin. By DAVID WALSH, M.D. Edin. London: Baillière, Tindall & Cox. 1897.

THIS essay reproduces in substance the author's graduation thesis, and is a discussion of the doctrine that the various excretory organs of the body may in the exercise of their function be irritated and inflamed through the agency of the substances excreted. The irritating substances considered belong to these three claeses—drugs, normal excretory products, and specific disease poisons. Although cutaneous eruptions get their fair share of attention, and although uræmic vomiting and diarrhœa are mentioned, we miss any reference to the manifold eruptions associated with the uræmic state. Another subject which we might have expected, but have failed to find discussed in this essay, is the rash that occasionally follows the administration of an enema.

The book is well printed, and calls attention to an important subject.

A Handbook of Diseases of the Nose and Pharynx. By JAMES B. BALL, M.D. Third Edition. London: Baillière, Tindall & Cox. 1897.

THIS third edition is very similar to its immediate predecessor. It opens with a clear and concise description of the anatomy and physiology of the nose and pharynx, which is followed by chapters on general diagnosis and on the methods of treatment, these together forming Part I.

In the second part a detailed systematic description of the diseases of the nose, naso-pharynx, and accessory sinuses is given, and the third part is taken up with the diseases of the pharynx, including some affections of the tonsils. The first and second parts are excellent, but the third part is unsatisfactory, in that it takes cognizance of a limited portion of the throat only. This is done presumably for the better elucidation of the affections of the nose, though in reality it treats of but a few of the affections of the fauces and pharynx, the majority of which occur quite apart from any association with the nose.

As a practical treatise on the nose, however, this volume can be, as the second edition was in these pages, warmly recommended.

Elementary Physiology for Nurses. By C. F. MARSHALL, M.D., B.Sc., F.R.C.S. London: The Scientific Press, Limited. 1897.

THE object of this little book is fully explained by its title, and the writer has wisely compressed the work into the smallest possible limits. All theory is avoided, and the amount of physiology which it is necessary for a nurse to be acquainted with has been very nicely gauged.

Perhaps the most striking feature of the book is the originality displayed in considering those parts of the subject which are most difficult to the beginner, and many of the similes are useful in the same way. In this respect the description of the circulatory system is particularly good.

The composition is somewhat abrupt and crabbed, but this is no doubt due in part to the compressed nature of the work, and the necessity of stating facts only, and these in very rapid sequence. The illustrations are clear, though by no means artistic.

An Account of the Life and Works of Dr. Robert Watt, Author of the "Bibliotheca Britannica." By JAMES FINLAYSON, M.D., Hon. Librarian to the Faculty of Physicians and Surgeons, Glasgow. With a Portrait. London: Smith, Elder & Co. 1897.

OUTSIDE of the ranks of librarians and bibliophiles the name of Dr. Robert Watt, the author of the *Bibliotheca Britannica*, is now but little known. The present excellent and concise memoir by our esteemed Honorary Librarian of the Faculty will do much to make the name of this devoted man of letters better known to the members of his own profession.

Dr. Finlayson's little book is characterised by his usual minute accuracy as to historical and biographical detail, and the work has evidently been prompted by a sincere admiration for the noble character of a man who fell at his post stricken to death by the great work he had accomplished for the benefit of mankind, and before he saw the fruits of his labours. Born in Stewarton in 1774, the son of a small farmer, he became a ploughboy at the age of 13, then a builder of stone dykes in Galloway, then a joiner and cabinet-maker in Glasgow with his brother John, and then "an unquenchable desire to follow" the course of a Glasgow student friend of his brother's led him to study. At the age of 18 we find him studying Greek and Latin at Stewarton under Mr. Duncan Macfarlane, schoolmaster there; in the following years at Edinburgh or Glasgow University; and in 1799 licensed to practise by the Faculty of Physicians and Surgeons of Glasgow, and settled in Paisley. In 1810 he settled in Glasgow, and began at same time to lecture on medicine. For his class he published a catalogue of medical books suitable for the students attending lectures, and he admitted his own pupils to his private library. This may be said to have been the start of the *Bibliotheca*, work upon which was to occupy a great portion of the remainder of his life, amidst the calls of a busy practice and even when sickness had laid him low. In 1810 he graduated M.D., King's College, Aberdeen, and from 1814 to 1816 he was President of the Faculty of Physicians and Surgeons. In 1817 he withdrew from practice, to urge on the work often from a sick bed, and in 1819 he died, leaving his executors to see the colossal catalogue through the press. He left his family in want. The Index was to have been the provision for them, and the publishers failed before they paid the widow the £2,000 agreed upon. What a tragedy! One after another a large family died till the widow, with a pension of £45 a year from the Widows' Fund of the Faculty, and her youngest daughter were alone left. With the mother's death the pension lapsed, and the daughter died insane in the poorhouse in 1864, when hesitating government authorities were making up their minds to grant a beggarly pension of £50 a year. Verily, Watt's reward was not of this world.

Watt was the author of many smaller works. Of his medical writings his treatise on the chin-cough, with its appendix on the relative mortality of the principal diseases of children, attained the greatest celebrity, and is even yet famous as a statistical classic. For full information on Watt's life and work we refer our readers to Dr. Finlayson's excellent and sympathetic memoir.

Praxis der Harnanalyse, Anleitung zur chemischen Untersuchung des Harns, nebst einem Anhang Analyse des Mageninhets. Von Dr. LASSAR-COHN, Universitätsprofessor zu Königsberg i Pr. Hamburg: Leopold Voss. 1897.

WE have pleasure in recommending this *brochure* as a handy and accurate compendium of urine analysis. For self-study on the part of those who have no access to many abnormal urines, the author gives directions for the artificial preparation of abnormal urines by the addition of various substances, so that practice in testing may be obtained. The idea is original, and may be of service to lecturers when ordinary clinical specimens fail. The appendix on the analysis of the stomach contents will also prove useful.

The Mystery and Romance of Alchemy and Pharmacy. By C. J. S. THOMSON. London: The Scientific Press, Limited. 1897.

THE reader will find a great deal of miscellaneous historical information between the boards of this book. It has no pretensions to scientific accuracy, and no attempt has been made at any chronological or evolutional arrangement. The book in many parts is rather for the general than the expert reader. We think the chapters on the apothecaries, and the history of pharmacy are, on the whole, the best. On the history of general medicine, which occupies the opening chapters, the author is decidedly weak. The second part, entitled Alchemy and Pharmacy in Literature, is very well done on the whole, although, we think, the two pages devoted to the medicine men of Sir Walter Scott might easily have been expanded. We can promise our readers an interesting evening or two at the fireside with this volume and a good-going pipe.

The Student's Guide to Medical Diagnosis. By SAMUEL FENWICK, M.D., F.R.C.P., and W. SOLTAU FENWICK, M.D., B.S. Lond. Eighth Edition. London: J. & A. Churchill. 1897.

FOR twenty-eight years Fenwick's *Medical Diagnosis* has been a well-known text-book to successive generations of students. Many advances in our knowledge of the nature and causation of disease have been made since then, and so the present edition of the book has been practically re-written. The work is in all respects well up to date, and can still be most cordially recommended as a reliable guide to those commencing the study of clinical medicine.

Clinical Methods: a Guide to the Practical Study of Medicine. By ROBERT HUTCHISON, M.D., M.R.C.P., and HARRY RAINY, M.A., F.R.C.P. Ed. With 137 Illustrations and 8 Coloured Plates. London: Cassell and Company, Limited. 1897.

WHILE there is nothing original in this book, it can be safely recommended as a reliable guide to the clinical clerk investigating a medical case. It seems to be well up to date, particularly as regards recent advances in bacteriological and neurological methods. The volume is well illustrated, and the coloured plates are very good, particularly those of the blood. The series of sphygmographic tracings is well chosen and illustrative. In the section on the theory of percussion we certainly object to the use of the terms "full" and "emptier" as applied to the description of resonance. We think they merely tend to render still more obscure a very obscure subject. On the whole, the volume is an excellent compendium of modern clinical methods.

Some Aspects of Infantile Syphilis, being the Hunterian Lectures delivered at the Royal College of Surgeons in 1896. By J. A. COUTTS, M.B.Cantab. London: Rivington, Percival & Co. 1897.

THE subject matter of Dr. Coutts' Hunterian lectures is one of great importance and of the utmost difficulty. We have read the lectures with great pleasure, and can say that the lecturer has dealt with the intricacies of infantile syphilis in a masterly and philosophic manner. No doubt in the space of three lectures only a portion of the vast field of hereditary syphilis could be overtaken, but Dr. Coutts has made a wise selection of those aspects of the affection which have the greatest bearing upon everyday life and practice. In his first lecture he deals with the parental sources of inherited syphilis. The author expresses his views in a clear and incisive manner, although everywhere giving due consideration to the opinions of other authorities. The lecture is not only a criticism of current opinion, but a clear statement of carefully formed personal opinion. The influence of syphilis upon the mortality of the infant is first considered and illustrated by statistics. Next, the question of paternal transmission, including such important matters as the time when marriage is safe after acquired syphilis, is taken up; and, finally, we have a masterly criticism of the doctrine of "syphilis by conception," in which the author does not believe. We have no desire to attempt to settle such a difficult question, but we cannot help thinking, however, that the author is premature in the arguments he bases on the production of a hypothetical "syphilitic anti-toxin." Would it not be better to wait until syphilis is no longer a disease of uncertain bacteriology before indulging in such wild speculations. The lecture is well worth reading. Lectures II and III deal with the symptoms and lesions of syphilis, and the book is concluded with a discussion of Colles' law.

A Handbook of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, A.M., M.B., F.R.C.S.I. Sixth Edition, with Illustrations. London: H. K. Lewis. 1897.

WE have pleasure in calling the attention of our readers to the publication of the sixth edition of this well-known text-book. All through the book a careful revision has been carried out, and many minor alterations effected.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections in Photo-Lithochromes, from Models in the Saint Louis Hospital, Paris. Edited and Annotated by J. J. Pringle, M.B., F.R.C.P. Parts X and XI. London: The Rebman Publishing Company. 1897.

THE high artistic character of the plates in this valuable *Atlas* continues to be maintained. The realism of some of them is startling, when we consider that they are copied, not from the patient, but from the museum models, Baretta. The subjects illustrated in Parts X and XI are—1, Polymorphous Syphilides (Alfred Fournier); 2, Paget's Disease (J. Darier); 3, Trophic Ulcers of the Hand and Forearm (L. Jacquet); 4, Extra-genital Syphilitic Chancres (Alfred Fournier); 5, Hydroic Erythema of Hands and Lips (R. Du Cartel); 6, Pigmentary Syphilide (Georges Baudouin); 7, Molluscum Contagosium (Georges Baudouin); 8, Vascular Nævus Verrucosus of the Leg (Ernest Gaucher); and, 9, Pediculosis Vestimentorum with Pigmentation (L. Jacquet).

Royal Infirmary Cliniques. By Alexander James, M.D., F.R.C.P.E., Physician to the Royal Infirmary, Edinburgh. Edinburgh: Oliver & Boyd. 1896.

THIS volume consists of sixteen lectures, delivered in the Edinburgh Royal Infirmary, and we have no hesitation in pronouncing them to be models of what clinical lectures for students should be. Dr. James's method of investigating his cases seems excellent. The symptoms and signs are clearly set forth, and their subsequent analysis is all that the most fastidious could desire.

As to the cases themselves, they are all interesting, but with regard to some we feel that a *post-mortem* examination is necessary to make sure of the diagnosis and to complete the case. This is specially true of the case of Friedreich's ataxy, and also of the case of spinal injury. In the latter, too, we do not quite follow the remarks (p. 125) as to the course of the sensory fibres in the spinal cord.

In the case of paralysis of the arm due to injury, the combination of anæsthesia and loss of thermal sense with hyperalgesia, is most interesting. But if the lesion lies in the nerve trunk, it must be most discrete, so as to stop the conduction of tactile and thermal impressions, while at the same time increasing that of painful sensation.

To some of the conclusions in "A Case of Pons Lesion," we might also take exception. Thus, as regards loss of the sense of taste and of general sensation on the right side of the tongue, is it not more commonly taught that the taste fibres for the anterior as well as the posterior part of the tongue enter the brain by the fifth nerve? By supposing the lesion to involve the parts of the sensory nucleus of the fifth, which have to do with the general and special senses of the tongue, we need not include the glosso-pharyngeal in the lesion at all, unless it is certain that there is loss of tactile sense at the posterior part of the tongue.

These, however, are points on which one need not insist, as our knowledge of the physiology of the brain is not yet sufficiently assured.

The book is well printed and nicely bound, and it is with every confidence that we recommend it to our readers.

King's College Hospital Reports. Edited by NESTOR TIRARD, M.D., F.R.C.P.; W. WATSON CHEYNE, F.R.C.S., F.R.S.; JOHN PHILLIPS, M.A., M.D., F.R.C.P.; and W. D. HALLIBURTON, M.D., F.R.S. Volume III (October, 1895—September, 1896). London. 1897.

THE first item in this volume of Hospital Reports is a series of articles on the late Sir George Johnson, whose portrait is also given. The contents do not otherwise call for detailed comment here, but it is right to say that the work reflects credit upon the editors and the contributors, and that the reports from the various departments of the hospital are so arranged as to give an excellent idea of the good work done by the institution.

The Practitioner: a Journal of Practical Medicine and Surgery. Edited by MALCOLM MORRIS. New Series, Vol. V (January to June, 1897). London: Cassell & Co., Limited.

THE *Practitioner* is now in the third year of its new series, and this, the first volume for 1897, will easily maintain the reputation of editor, contributors, and publishers for the capacity to produce a good all-round medical journal calculated to meet all the wants of the general practitioner. The special features of this magazine need not be adverted to now, but we may remark that the value of the present volume is enhanced by the fine series of articles in the June number on the advances made in the various branches of the healing art during the sixty years of Her Majesty's reign.

CORRESPONDENCE.

THE ADMINISTRATION OF CHLOROFORM.

To the Editors of the "Glasgow Medical Journal."

SIRS,—The varying conclusions arrived at by physiologists from direct experiments on animals, and professors in anæsthetics from a clinical standpoint from observing the effects of inhaled chloroform, confirm and strengthen our conviction that, if chloroform is to be administered to do good invariably without the risk of evil, this potent agent should always be administered cautiously and systematically by the rules laid down by Dr. John Snow for its safe administration. It has been proved by thousands of cases reported from different parts of the world that if the administration, and, therefore, the action, of inhaled chloroform is limited to the smallest quantity found capable of causing and sustaining perfect anæsthesia in adults for any surgical operation, none of the evil effects resulting when this potent agent is administered in the "usual way" from repeated over-administration can possibly be induced, when facts prove that perfect insensibility can be induced in adults with frequently less than from 1 per cent and not exceeding 2·76 per cent of vapour of chloroform in the air the patients were breathing, as shown in the examples given in our advertisement in the present number of your *Journal.*

By directing your readers to these plain facts or results, by which alone an approximately correct estimate can be made of the value of a method of chloroform administration, you would much oblige, yours respectfully,

KROHNE & SESEMANN.

LONDON, *30th September*, *1897.*

[We, of course, do not hold ourselves in any way responsible for the opinions expressed by our correspondents.—EDS.]

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

NERVOUS DISEASES AND INSANITY.

By Dr. R. S. STEWART.

Age in Relation to the Treatment of Melancholia. By Gasquet and Cones (*Journal of Mental Science*, July, 1897).—In some cases of melancholia opium has a marvellous effect, while in others, seemingly differing but little from these, it completely fails. The explanation of this seems to lie in the age of the patients, for these observers find that it is in patients over 50 years of age that the most striking and rapid improvement follows this form of treatment, while in those under 30 quite the reverse occurs. In the case of those between 30 and 50 the reaction of opium is uncertain, and the progress towards recovery slow. As a substitute for opium where this has failed, sulphonal was found to give very good results, given in average doses of 30 grs. each night.

Sulphate of Dubvisin. By Skeen (*Journal of Mental Science*, July, 1897).—Good results followed the use of this drug, given in doses varying from $\frac{1}{100}$ to $\frac{1}{25}$ of a gr., in all forms of chronic insanity with excitement. It was found to be distinctly harmful in acute mania and in melancholia, and its administration requires care in the case of debilitated persons.

Diagnosis of General Paralysis. By Arnaud (*Progrès Médical*, 7th August, 1897).—It is pointed out by this writer that, although general paralysis has distinctive characters, no one of the symptoms is pathognomonic, and that the diagnosis cannot be determined unless the two orders of symptoms, the physical and the psychical, are both present. The most essential of these are, on the mental side, generalised and progressive dementia with superadded delusions of a special character, and, on the physical side, embarrassment of speech, gradual and progressive oculo-pupillary trouble, psycho-motor ataxia and cerebral seizures. The gradual and progressive dementia, with these superadded factors, is the cardinal symptom of general paralysis, and constitutes a veritable paralytic stigma.

Derby Borough Asylum: Annual Report, 1896.—Derbyshire's lunacy-rate is a creditably low one, and the citizens of the borough of Derby possess the further characteristic that when they do become insane they evince a wonderful recuperative capacity. The recovery-rate in this asylum last year amounted to no less than 51·5 per cent of the admissions, and that in spite of the fact that nearly 12 per cent of these last were affected with that incurable malady, general paralysis; and treatment by thyroid appears to have contributed appreciably to this satisfactory state of affairs.

Voluminous Glioma of the Cerebellum. By Trenel and Antheaume (*Archives de Neurologie*, July, 1897).—In this case, a female patient in one of the Paris asylums, the affection commenced at the age of 58, with cephalalgia, vertigo, and paresis, with vaso-constriction of the left side of the face. Four years afterwards, attacks of loss of consciousness, vomiting, locomotive troubles, progressive amaurosis with visual hallucinations, deafness complete on the left side, with auditory hallucinations, supervened, and ultimately she became depressed, developed melancholic delusions, and attempted suicide. The gait was paretic, and finally spastic contracture of the lower limbs supervened, the arms remaining unaffected. Death occurred from marasmus, and at the autopsy a large glioma was found at the anterior border of the left lobe of the cerebellum, leading to compression of the cerebellum and pons, and involving the trigeminal, facial, and auditory nerves on the left side. The mental symptoms are regarded as due, not directly to the presence of the tumour, but to a latent predisposition to insanity which was awakened by the new growth.

MEDICINE.

By W. R. JACK, M.D., B.Sc.

Koch's New Tuberculin.—A number of articles on the employment of this drug has recently appeared in the *Deutsche Med. Wochenschrift.* The first of these is a note by Schultze, of Bonn (8th July, 1897), upon nine cases treated by the drug for periods varying from one to two months. The dose was so regulated that the temperature never rose above 38° C. In no case were there such serious results as frequently followed the use of the old tuberculin, although in one tubercular disease of the larynx developed during treatment, and in another, diarrhœa, probably tubercular. In these cases the treatment was abandoned. In four others there was no improvement; in a seventh, of dry pleurisy, improvement took place, as also in the eighth and ninth, in one of which a severe perichondritis of the arytenoid cartilages healed up during treatment.

Slawyk (22nd July, 1897) has a paper on two cases of children treated by this method at the Charité, Berlin. The injections were carried on over a period of three months. They were performed according to Koch's directions, the lowest dose being $\frac{1}{4000}$ mg., the highest 6 mg. The first child, 9 years old, was markedly strumous, had enlarged glands and long cicatrices in the neck, a prominent abdomen, enlarged spleen, and dry crepitant râles on the left side, at the level of the third rib in front and the spine of the scapula behind. There was no fever. The second child, 8 years old, was weakly, and presented signs of rickets. Both tympanic membranes showed old cicatrices, and there was pannus of the left cornea. The cervical, submaxillary, and inguinal glands were enlarged. There was intense dulness over the whole right lung, with sharp breathing and crepitant râles; the left lung was normal. The first child, much the stronger, reacted repeatedly to the injection to an alarming extent; the second withstood them easily. The reactions consisted in fever, sweating, collapse, and local reddening of old cicatrices and the seats of former injections. Increasing doses did not appear to produce tolerance; in fact a second injection of the same quantity sometimes produced a reaction where the first had failed to do so. The temperature generally rose on the day of the injection, and sometimes remained high for several days, rising as high on one occasion as 39·8° C. Severe collapse followed the last injection in Case I, and lasted an entire day. The local congestions produced at spots, such as the points of former injections, certainly free from tubercular disease, were remarkable. Owing to the short period that the cases were under observation, nothing can be said as to the therapeutic value of the treatment, but in the second case there was a decided improvement in the pulmonary condition, while in the first the swelling of the cervical glands diminished considerably, as did the enlargement of the spleen.

It appears from the observations of Bussenius (8th July) and Wörner (22nd July) that the virulence of the preparation is not constant, for the former had five or six cases in which, when the higher doses were reached, the temperature rose up to 40·7° C. and 41·3° C. They were all injected from a flask issued on the 11th June, and Wörner had a similar experience with a flask issued on the same day, while no such temperatures were observed in his other patients.

Seeligmann (22nd July) has obtained a good result in a case of tubercular disease of the skin and genital organs. There was widely spread lupous ulceration of the nose, and tubercular pyosalpinx on both sides, accompanied by tubercular endometritis, with consecutive erosions of the os. The bacillus was found in the cervical secretion. No local treatment was attempted. Up to the time of writing the patient had received in all forty injections, in increasing doses. There never was any reaction. The general health improved, menstruation became regular, and the abdominal pain disappeared, while the discharge was much lessened. There was marked improvement in the lupus. The two tumours beside the uterus almost entirely disappeared, and the erosions of the os became much smaller. The bacillus also could latterly be no longer found.

Doutrelepont (19th August) reports fifteen cases of lupus treated by this method. According to Koch's directions, $\frac{1}{500}$ mg. should be given in the first injection, and the dose so increased that the temperature should not rise after any injection beyond half a degree C. ($\frac{9}{10}$° F.). At first Doutrelepont gave $\frac{1}{500}$ mg., then $\frac{1}{250}$, $\frac{1}{100}$, and so on, but found that this caused marked reaction to the later doses. He then increased each dose by $\frac{1}{500}$ up to $\frac{1}{50}$, then by $\frac{1}{50}$ up to $\frac{1}{5}$, and so on up to 1 mg. Even with this procedure, doses of $\frac{2}{5}$ mg. sometimes raised the temperature to 40° (104° F.), and since then he has been even more careful. A second injection is never given till the temperature has again become completely normal. He confirms Bussenius in his observation that the age of the preparation affects the rise of temperature. With regard to the local effect, he has only seen distinct inflammatory reactions in one case, in which the bones of the nose were carious. Once, after an injection of $\frac{11}{16}$ mg., he noticed a temporary enlargement of the spleen, which soon disappeared, and once albuminuria was present for two days. On the whole, the patients gained in weight, and the injections were well borne. After the injections there was a comparatively rapid healing of the ulcers, hypertrophic lupus diminished in bulk, apple-jelly nodules disappeared, and cicatricial tissue soon formed. Swollen glands became less prominent, though some suppurated, necessitating operation. There was thus a progressive improvement in all the cases, and although nothing final can yet be said, the new tuberculin appears to have a more curative effect upon lupus than the old.

Leick (19th August) reports fifteen cases of phthisis. Beginning with $\frac{1}{500}$ mg., the dose was doubled every second day, unless any special circumstance prevented. The injection was made between the shoulders, where it often caused burning pain, lasting twenty-four hours or more. There was occasionally slight redness at the point of injection, never infiltration or abscess. Fever was always slight, and sometimes absent. In all the patients tubercle bacilli were found in the sputum. In none was the result more successful than that often attained by the ordinary hospital treatment of such patients. Koch states that the new tuberculin is not likely to be of service in cases where the fever runs higher than 38° C. But it is precisely in these cases that hospital treatment is also likely to produce improvement.

Rumpf (19th August) refers to the occasionally satisfactory results, and to the undoubted diagnostic value, of the old tuberculin, and gives the history of twelve cases of phthisis treated by the new method. These were all in the early stages of the disease, the evening temperature in none rising above 37·5° C. In all of them the tubercle bacillus was found. The injections were generally painful, and often caused inflammatory infiltrations of the skin. In the first case, a girl of 19, with tubercular catarrh of both apices, the maximum dose directed by Koch—20 mg.—was obtained in fifty-five days without a single febrile reaction. Four days after the last injection high intermittent fever set in, and persisted till the patient left the hospital, the apical catarrh being rather increased than diminished. Summing up his twelve cases, Rumpf concludes that (1) the injections frequently cause painful inflammatory infiltrations, disappearing only slowly, and very rarely causing abscess; (2) if the dose be slowly increased, the maximum may be reached without much reaction, but there is no security that fever will not follow the second injection of a purely well-borne dose, or that the fever may not pass into one of an intermittent or remittent type; (3) the preparation is, therefore, not uniform and reliable; (4) the reaction may involve not only fever, but increased rapidity of pulse, slight cyanosis, and marked disturbance of the general health; (5) these latter symptoms may occur even when there is no fever; (6) it is very doubtful if immunity is attained even by Koch's maximal dose, and if it be not, the only advantage of the new over the old preparation is its greater richness in toxins; (7) if it is to be used, even in early phthisis, a preparation of uniform effect must be obtained.

Müller (19th August) narrates a case in which a patient at the Charité, undergoing the treatment for phthisis pulmonalis, had at the same time tubercular disease of the left middle ear, which was not in any way improved by the injections. Three months afterwards, while they were still being continued, he developed an acute tubercular inflammation of the right middle ear. Miliary tubercles were to be seen behind the malleus, and the bacillus was found in the secretion. The ear was previously perfectly sound, and the disease developed quite suddenly the day after an injection.

Herzfeld (19th August) reports seven cases of laryngeal tuberculosis, in which the pulmonary affection was not far advanced, and in which Koch's postulates were satisfied. Until patients can endure the maximal dose without reaction (Koch's condition of immunity), many months, he says, must pass, and it by no means follows that a patient is then immune. With the greatest care, he could not altogether avoid high temperatures. Diarrhœa occurred once, albuminuria several times. Only once was marked improvement noted, and in three cases the condition became much worse. Local treatment would certainly have had a better effect.

Finally, Baudach (19th August) reports twenty cases of phthisis pulmonalis in the early stage, of which want of space forbids more than the mention. His general impression, however, is that the results were decidedly good, and that in several cases an improvement, already begun, had been distinctly accelerated.

Morvan's Disease.—At a meeting of the Société Médicale des Hôpitaux, there was reported the autopsy on a case of Morvan's disease. The patient had been shown by Charcot to his clinique in 1890, and then it was noted that the sensory disturbances were limited to the left hand, and that there was no muscular atrophy. The *post-mortem* examination revealed a cavity in the spinal cord, somewhat triangular in shape, and extending from the sixth cervical to the sixth dorsal vertebra. This cavity occupied chiefly the posterior commissure and posterior left horn, the anterior horn being almost intact. The report goes on to say that, from this case, one would conclude, that the lesion in Morvan's disease is situated in the posterior horn of the grey matter, and therefore that Morvan's disease is just a variety of syringomyelia. The report is silent as to the condition of the peripheral nerves.—(*La France Médicale*, 19th February, 1897.)—W. K. H.

A Rare Case of Bulbar Paralysis.—MM. Widal and Marinesco reported to the Société Médicale des Hôpitaux a case of what they call "paralysie bulbaire asthénique descendante," or what Oppenheim named "bulbar paralysis without anatomical lesion." The patient was a man, aged 31. No cause was known for his illness, which set in with severe pain in the head. On the sixth day of this pain ptosis was noted in one eye, and the next day in the other eye as well. A day later still, there was paralysis of the tongue. Following this there developed ophthalmoplegia, left facial paralysis, difficulty of phonation and of deglutition. Then the muscles of the neck became involved, so that the head could not be held in the erect position. There was some loss of power in the arms and in the legs, but it was of such a nature that it was only noticeable when the muscles were fatigued. If the muscles of the arms and legs had been at rest for some time there was comparatively little loss of power to be noted, but paresis developed shortly after the muscles were brought into action (syndrome d'Erb). There was no muscular atrophy and no reaction of degeneration. The patient died with involvement of respiration on the sixteeenth day after the onset of the ptosis.

On *post-mortem* examination there were no macroscopic appearances differing from the normal. It was only on staining by Nissl's method that there was found to be certain changes in the plasma of the ganglion cells of the cervical spinal cord and of the bulbar nuclei corresponding to the muscles affected. The changes in the plasma of these ganglion cells were the same as have been noted in deaths from certain intoxications; and the inference drawn is that this form of bulbar paralysis is probably due to a toxin generated in the blood or tissues, or else introduced directly from without. This is, the authors add, the first case of the kind where microscopic changes in the ganglion cells have been discovered.—(Reported in *La France Médicale*, 16th April, 1897.) —W. K. H.

Intestinal Lithiasis.—At a meeting of the Académie de Médicine (9th March, 1897), Dr. Dieulafoy read a most interesting paper on the above subject. He narrated the histories of some twelve cases where gravel was being passed *per anum.* The presence of this foreign material in the intestine usually gave rise to pain, which, in some of the cases, was as severe as a renal or an hepatic colic. No precise seat could be given to this pain, as it was rarely for long confined to one part of the abdomen. The painful crisis was often preceded by a feeling of malaise and languor, and a tympanicity of the abdomen. The pain was followed by the expulsion of fæcal matter, sometimes as scybala and sometimes as diarrhœa, with mucus and pieces of membrane in the motion. In this excretion was found gravel, sand, or calculus, as the case might be. In most of the cases the gravel was composed of stercoral organic material, impregnated with salts of lime and magnesia. In many of the cases reported there was distinct evidence of a gouty diathesis, and in some of them there were concretions in the urinary and biliary passages, as well as in the intestinal tract. So that Dieulafoy concludes that there may exist an intestinal lithiasis as there undoubtedly is a biliary lithiasis and an "urinary" lithiasis.—(*Bul. de l'Acad. de Méd.*, 9th March, 1897.)—W. K. H.

DISEASES OF CHILDREN.

By JOHN LINDSAY STEVEN, M.D.

The Treatment of Pott's Disease by Forcible Reduction of the Deformity. By Dr. H. Ling Taylor, of New York.—There is perhaps no disease whose treatment is more tedious than vertebral tuberculosis, and while the ultimate results are, under favouring conditions, fairly satisfactory, under the adverse circumstances which too commonly prevail, especially among the poor, this is far from being the case. Word now comes from France that the problem has been solved, and that what has taken years can now be better done in a few months. M. Calot, of Berck, in a recent communication to the Paris Academy of Medicine, published in the *Annales de Chirurgie et d'Orthopédie* for December last, states that he has performed the operation of forcible correction of the bosse thirty-seven times without an accident, and with the happiest results. After chloroformisation the child is placed face down, and while the assistants make traction on the extremities the operator presses down upon the bosse with all his strength. Snapping sounds are heard, and the deformity in recent cases disappears within a couple of minutes; callosities are excised, and in the severe cases the spinous processes over the bosse are removed. The improved position is maintained by the application of a strong plaster jacket, including the head and pelvis as well as the trunk. This is allowed to remain three or four months, and is followed by a second and sometimes by a third; after this consolidation is said to be complete, and the child is allowed to go about with an ordinary plaster corset. The patients treated in this manner have ranged from 2 to 20 years of age, and their deformity has lasted from three months to eight years. There have been no deaths, and in only one case symptoms of paralysis, which disappeared after the adjustment of a stronger jacket. In two cases abscess followed; on the other hand, in three cases in which abscess was already present, these were absorbed. In projections of moderate size with a duration of from four to eight months, the deformity entirely disappeared; in the severe deformities, with a duration up to six years, the results were often nearly perfect and always surprising. In the few cases in which it was not satisfactory, the operation was followed by a cuneiform resection of the spinal column, which permitted considerable further correction.

M. Calot considers the method by forcible correction the ideal treatment, since the vertebral bodies are completely relieved of pressure, and claims that all beginning cases can be cured without deformity.

To deliberately break through and tear open a tuberculous focus has never been considered good surgery; in the light of our present knowledge it seems amazing that serious results have not followed such a procedure, especially when we recall the many recorded cases in which general or meningeal tuberculosis has followed the most trivial interference. The author does not state how much time has elapsed since the observations; evidently a period of several years and a much larger experience would be necessary to justify such confident and sweeping statements. We also miss tracings and photographs showing the amount of the deformity and of the improvement effected. Still, sober conservatism has received many rude shocks in the past, and is probably destined to receive more, and we shall do well to await further and more detailed reports. While earnestly hoping that the experience of experts may result in a radical improvement of present methods, we cannot but counsel the the extremest caution, lest serious harm result from each experimentation.—(*Pediatrics*, 1st April, 1897.)

[This subject attracted considerable attention at the recent Moscow meeting, and views very similar to those of Dr. Taylor were freely given expression to; even M. Calot would seem to have modified his original opinions.—J. L. S.]

The Bacteriological Examination of Nine Autopsies on Cases of Diphtheria. By Dr. W. R. Stokes (*Boston Medical and Surgical Journal*, vol. cxxxiii, No. 24).—These were all uncomplicated cases of diphtheria, in which antitoxin had been administered.

The method of examination consisted in making cultures on coagulated blood-serum "slants" (Lœffler's mixture) from the lung, liver, spleen, kidney, and the blood of the heart. In all of the cases the bacillus diphtheriæ was found *post-mortem* in cultures from the respiratory tract.

In eight of the nine cases of uncomplicated diphtheria to which antitoxin had been given, the bacteriological examination at the autopsy showed a more or less well-marked invasion of the blood by the pyogenic cocci. The results in detail are as follows:—In five cases the streptococcus was found in the liver, spleen, kidney and the blood of the heart; in one case in the kidney and blood of the heart; and in one case in the spleen. The pneumococcus (micrococcus lanceolatus) was found only infrequently, it being observed in two cases in the kidney, in one of which the streptococcus was also found in the spleen. In the cultures from one case the only organism present was the bacillus coli communis.

In the lungs of all these cases was found the bacillus diphtheriæ, streptococci, pneumococci, and the staphylococcus pyogenes aureus, either alone or in various combinations.

The presence of the organisms mentioned above in the various viscera enables us to better understand the fatal issue in spite of the antitoxin given; for this agent, as stated above, cannot be assumed to act against any other organism than the bacillus diphtheriæ. Assuming, therefore, beyond peradventure, the efficacy of this remedy, the importance of its early and thorough administration cannot be over-estimated, for by this means the dangers of secondary infection may not only be lessened, but if this condition be present, the system may possibly be better prepared to overcome the ill effects of the various complicating bacteria present in the body.

As to the occurrence of the bacillus diphtheriæ in the internal organs in these nine cases, it cannot be said that it has been met with any less frequently than in other cases which have come to autopsy at the City Hospital, and which are referred to above. In these antitoxin cases it has been found in the kidney in four cases, and once in the heart and spleen respectively.—(*Archives of Pediatrics*, May, 1897.)

Synopsis of Fifty-six Cases of Empyema Operated upon during 1896, in the Children's Service of Mount Sinai Hospital, New York, with Remarks.—The following paper was read by Dr. B. Scharlau before the American Pediatric Society, Washington, 4th May, 1897:—

The proper treatment of empyema is still open to discussion, and the views differ widely; therefore I thought it timely to bring before you a comparatively large number of cases, all treated within one year in the same hospital after a uniform plan, namely, primary exsection of a rib in every case.

I have operated in 1896 upon fifty-six children, twenty-eight male ones and twenty eight female ones; the youngest patient was 15 weeks, the oldest one was 13 years old. The empyema was found thirty-five times on the right, twenty times on the left, and once on both sides (this 2-year old patient recovered). As far as could be ascertained the children were sick on admission—one week, twice; two weeks, eleven times; three weeks, thirteen times; four weeks, six times; five weeks, six times; seven weeks, once; two months, five times; three months, once; unknown, six times.

In twenty-two cases the patients did have or still had pneumonia. There is a marked difference in the results during the first and the second six months of the year. While in the last half year only two died out of twenty-six cases, sixteen died out of thirty-two during the first half year, making a total of thirty-six recoveries and eighteen deaths; two children left the hospital improved (by request of the parents).

A death-rate of 33 per cent seems to be rather large, but the results will appear in a much better light if we look into the causes of death. Two poorly nourished children died within three days after the operation, and in these cases alone the shock from the operation might be accused as having caused death; one child died suddenly from an unknown cause when really well; two children died from measles and one from diphtheria when nearly well; two died from tuberculosis; eight died from pneumonia, probably on a tubercular basis; one died from diarrhœa; one died from exhaustion.

In summarising, we find that from fifty-six cases only two died possibly in consequence of the operation, while sixteen died from causes which had no connection whatsoever with the surgical procedure; therefore it may well be said that the exsection of a rib is a comparatively harmless operation.

I do not intend to-day to dwell on its merits and demerits, wishing to discuss only one point in regard to the after-treatment. About a year and a half ago, during a discussion of empyema in the New York Academy of Medicine, Dr. Henry D. Chapin mentioned that he had operated a few times by exsecting a rib, but that he had returned to his old love, a simple intercostal incision, because after rib exsection often a thoracic fistula remained, which it was found difficult to close. But such a fistula will even be observed not infrequently after an intercostal incision. What is it caused by? Either the lungs have not sufficiently expanded, or the chest walls have not sufficiently sunk in, thereby allowing a cavity to persist, from which a constant flow of pus will force its way. Such a condition does not depend on whether we have operated by exsection or by incision, and cannot be laid at the door of the former method. On the contrary, an extensive secondary exsection of three, or four, or more ribs will mostly result in a complete cure.

But Dr. Chapin probably meant those cases in which the fistula is due to diseased or dead bone, and I admit that they are oftener met with after exsection than after incision. What I deny is, that it is difficult to close such a fistula. All we have to do is to remove the dead or diseased tissue and let the wound fill up by granulation. That we have to do such a secondary operation not infrequently after exsection is, in my opinion, caused by the too rapid regeneration of the exsected rib, while the process of suppuration is still going on, thereby preventing the formation of a normal bone. I lay before you a specimen which clearly illustrates the conditions existing under such circumstances:—A few months ago I operated on a little boy 2 years old; all seemed to go well, and the little patient left the hospital cured. He returned ten days ago with two small fistulæ leading to diseased bone. A week ago to-day I excised almost the whole rib from the cartilage to nearly the spine. The specimen shows that the exsected rib had been regenerated, but that the new bone had been interspersed with exuberant granulations. The child is doing well, and will shortly be cured completely and permanently.

In the discussion which followed, Dr. William Osler, of Baltimore, said it made a great difference what the bacteriological examination revealed. It was generally recognised that in certain cases of pneumococcus empyema a less serious operation than incision, a simple tapping, might suffice. In the cases of streptococcus empyema, he thought the surgeon who made a free opening did best for the patient.—(*Archives of Pediatrics*, August, 1897.)

Empyema in Young Children.—Empyema in children has always been for many reasons a disease of the greatest interest and importance—of interest on account of the differences of opinion often arising as to treatment; of importance because there is always a great likelihood of the presence of pus in the pleural cavity being overlooked. Empyema in children should not be a particularly fatal affection provided that an early and correct diagnosis is made, and that prompt measures are adopted for the removal of the purulent matter. According to Gerhardt most of the pleurisies occurring in children are purulent, and it has been estimated that fully two-thirds are metapneumonic. That the pus should be removed as quickly as possible is agreed upon unanimously, but in regard to the means to be employed toward this desirable end opinions still differ. Solis Cohen says that absorption of pus from the pleural cavity is practically a myth. Although it is possible for small effusions to be absorbed, it may be laid down as an axiom that where there is pus present the only rational treatment is evacuation. Now as to the means, the late Dr. Sturgess, of England, believed that resection of rib was necessary, and that the greatly lessened rate of mortality was altogether due to improved treatment in this respect. Some even go further, and insist on the necessity of washing out the cavity. Dr. Joseph Winters does not think that resection of the rib is indicated, but holds that incision and drainage is sufficient. He, however, is a believer in irrigation, and contends that washing out by means of hot water at a temperature of 125° or 130° cannot have a prejudicial effect. Dr. E. Cautley gave an account, at a meeting of the London Medical Society, of eighty-six cases treated by various methods, which gave a mortality of 16·6 per cent. The rate of mortality was about the same after resection as after incision, except that five out of six cases under 2 years old treated by resection were fatal. From a sifting of the mass of evidence on the subject it would appear that incision and drainage should be the treatment pursued with patients up to 2 years of age, and that after that period the surgeon should use his own judgment and perform resection if he deems it advisable. The death-rate from infancy to the age of 3 years is very high—nearly 50 per cent—but after the age of 3 the prognosis is much more favourable. The use of chloroform during the operation is not contraindicated. Dr. Winters advises that the patient should not be fully under the influence of the anæsthetic, as it is desirable that he should cough and, if possible, cry, so that the explosive expiratory efforts should forcibly expel the pus from the pleural sac. The most important point in the successful treatment of infantile empyema is to diagnose and operate quickly, and it is probable that a fatal issue at any age is rather the result of neglect to recognise the true nature of the case at an early period than from the operation itself. The after-treatment of empyema must be left to the discretion of the medical attendant, and conducted on ordinary surgical principles. Naturally, the patient should live under the most healthful conditions possible—plenty of light, fresh air, and easily digestible nourishing food. Pure air is our best remedy, and it is to be regretted that it is not more constantly at our disposal.—(*Pediatrics*, 15th August, 1897.)

GYNÆCOLOGY AND OBSTETRICS.

By E. H. LAWRENCE OLIPHANT, M.D.

On Breech Presentations with Extended Legs.—Drs. Griffith and Lea read a paper on this subject before the London Obstetrical Society (abstracted in the *Transactions*, 1897, Part I.) After giving details of seventeen cases, the authors go on to say that extension of the legs may be primary, that is, occurring before the onset of labour; or secondary, that is, produced during the course of the labour. If the limbs become separated from the buttocks, which do not engage early in labour, in a complete pelvic presentation, friction against the uterine walls may complete the extension; or, more probably, the feet and legs are arrested by the pelvic brim. Again, the feet may lie in an iliac fossa before the onset of labour. In these two ways the secondary variety, which is probably the more frequent, is produced.

The primary form is not uncommon, and may be recognised by certain peculiarities. If the legs have been extended during pregnancy, the child after birth draws them up with the knees extended, and with the feet lying close to the shoulders. This does not happen if the extension has been produced only during the labour. This does not always occur after the legs have been primarily extended, but the authors maintain that the converse holds good—viz., that if the child extends its legs in this way, there has been primary extension. The legs usually become naturally flexed twenty-four hours after delivery, though some cases of *genua recurvata* may possibly be caused by primary extension *in utero*. Extension occurs mainly in breech presentations, but has been observed in vertex presentations also.

The condition may be diagnosed during pregnancy by palpation, as M. Budin has pointed out. The presenting breech has been said not to lie in the pelvis before labour; but if the legs are extended, the breech does descend into the pelvic cavity, and may be mistaken for the head, more especially as cephalic ballottement is difficult to obtain. Vaginal examination may reveal the condition, more especially in a multipara with patulous os uteri.

The sinking of the breech in the pelvis also causes the fœtal heart sounds to be heard rather below than above the umbilicus on auscultation of the mother's abdomen, the converse of what is usually found in ordinary breech cases.

The extension of the legs tends to stiffen the trunk and prevent the usual lateral flexion of the trunk, by which the breech is usually born after rotation has occurred; yet the authors found a large proportion of their cases terminate spontaneously, especially in multiparæ. A possible cause of delay is the extension of the feet up to the head, which could not then enter the pelvic brim. But to allow this condition to arise the fœtal trunk must be flexed, as otherwise the feet reach only to the shoulders. The authors did not find the fœtal mortality higher than in ordinary breech cases, and ascribe the deaths chiefly to delay in the birth of the head.

As to treatment, it is suggested that cephalic version may be attempted during pregnancy; but if the breech is engaged, and the trunk stiffened by the splint-like position of the legs, version may be impossible. At the beginning of labour the authors suggest the use of Bounaire's method of bringing down the feet to the buttocks without extending the thighs. They also recommend this plan after the breech has entered the pelvic cavity, drawing attention to the expedient advocated by Pinard, of bringing the foot down to the operator's hand by pressure in the popliteal space. Failing this, the use of a soft fillet is recommended; the ends of a soft handkerchief are passed from without inwards over each groin, and the loop is then slipped above the iliac crests and over the sacrum. Pressure forwards of the breech *per rectum* may be sufficient.

In the discussion which followed, the use of the blunt hook and of the forceps was condemned, and the bringing down of the leg completely, rather than partially, was advised. Dr. Champneys drew attention to the neglect of abdominal pressure in this country, in the text-book at anyrate. Amputation of a thigh was suggested as a last resort.

The Anticipation of Post-Partum Hæmorrhage.—Dr. Atthill read a paper on this subject before the Royal Academy of Medicine in Ireland (reported in the *Dublin Journal of Medical Science*, June, 1897). He advocated the exhibition of ergot in combination with five or ten drop doses of liquor strychninæ for two or three weeks prior to the expected date of the confinement in the case of patients in whom a tendency to *post-partum* hæmorrhage was known to exist. He stated that he had been carrying out the practice in all suitable cases for twenty-five years, and had never seen it fail to produce good results, and had never seen it produce unpleasant symptoms, or injure mother or child. So far from inducing labour prematurely, the exhibition of ergot and strychnine tended to retard its onset. He instanced two cases that continued, one to the two hundred and ninety-third day and the other to the two hundred and eighty-eighth day, though both ladies had terminated all their previous pregnancies prematurely. Ergot was seldom of use after hæmorrhage had set in.

In the discussion which followed, the speakers spoke of the management of the third stage as the true prophylactic, Dr. Kidd especially warning against hurrying the expression of the placenta. Dr. Smith said that where there was a history of *post-partum* hæmorrhage in previous labours he expected to find albuminuria; if this were present he treated that symptom. Dr. Atthill contends that his treatment prevents subinvolution, which is the *fons et origo* of many ills.

Swabbing the Nose with Cocain as a Remedy for Neuralgic Dysmenorrhœa.—The *New York Medical Journal* (10th July, 1897) says Dr. Fliess, of Berlin, has observed a physiological connection between menstruation and certain parts of the nasal mucous membrane, such as that of the inferior turbinated bone and that covering a portion of the septum, rich in vessels and in glands, that some authors call the tuberculum septi. During menstruation, he says, the parts swell, become cyanotic, are very sensitive, and are often the source of hæmorrhages. The application of cocain hydrochloride to those parts causes the rapid subsidence of menstrual pain, provided it is not due to a mechanical cause, such as stenosis of the cervix uteri.

Apiolin in Neurotic Dysmenorrhœa.—Dr. Maddon, of Ohio (quoted in the *New York Medical Journal* of 3rd July, 1897), thinks that sooner or later there is a neurotic element in all cases of dysmenorrhœa, and he says that he has come to rely on apiolin in cases in which no tangible lesion is found in the pelvis. He gives it in capsule, thrice daily for three months.

Thyroid Extract in the Treatment of Myoma Uteri (*Medical News*, July, 1897).—Dr. Polk states that thyroid extract has a beneficial effect on the metrorrhagia of fibroid of the uterus, and that he has observed a diminution in the bulk, with improvement of the local and general symptoms.

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Ringworm and Alopecia Areata: their Pathology, Diagnosis, and Treatment, by H. Aldersmith, M.B. Lond. Fourth Edition. London: H. K. Lewis. 1897. (10s. 6d.)

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Manual of Gynecology, by D. Berry Hart, M.D., and A. H. Freeland Barbour, M.A., B.Sc., M.D. With Thirteen Lithographs and Three Hundred and Eighty-one Woodcuts. Fifth Edition. Edinburgh and London: W. & A. K. Johnston. 1897. (21s.)

The Dwelling-House, by George Vivian Poore, M.D., F.R.C.P. With Thirty-six Illustrations. London: Longmans, Geeen & Co. 1897. (3s. 6d.)

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Fevers and Infectious Diseases: their Nursing and Practical Management, by William Harding, M.D. Ed., M.R.C.P. Lond. London: The Scientific Press, Limited. 1897. (1s.)

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GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FIVE WEEKS ENDING 25TH SEPTEMBER, 1897.

	Week ending				
	Aug. 28.	Sept. 4.	Sept. 11.	Sept. 18.	Sept. 25.
Mean temperature,	58·1°	54·8°	49·5°	54·1°	51·5°
Mean range of temperature between day and night,	17·6°	13·2°	19·8°	14·0°	14·1°
Number of days on which rain fell,	3	7	1	3	5
Amount of rainfall, . ins.	0·26	1·87	0·10	0·67	0·58
Deaths registered,	271	248	261	270	255
Death-rates,	19·7	18·0	19·0	19·6	18·5
Zymotic death-rates,	5·0	4·2	3·5	3·1	2·4
Pulmonary death-rates,	4·6	4·1	5·1	4·8	5·8
Deaths—					
Under 1 year,	94	89	78	73	68
60 years and upwards,	28	36	40	49	54
Deaths from—					
Small-pox,	...	1	1	2	...
Measles,	...	1	1	1	2
Scarlet fever,	2	2	2	1	1
Diphtheria,	...	1	3	2	1
Whooping-cough,	12	13	9	7	13
Fever,	5	2	3	8	5
Diarrhœa,	50	38	29	22	11
Croup and laryngitis,	2	1	4	1	...
Bronchitis, pneumonia, and pleurisy,	33	34	47	50	60
Cases reported—					
Small-pox,	4	11	7	1	2
Diphtheria and membranous croup,	7	7	8	8	8
Erysipelas,	12	26	16	22	14
Scarlet fever,	35	45	74	71	78
Typhus fever,	...	1	3	3	...
Enteric fever,	39	52	36	34	20
Continued fever,	1	...	...	...	...
Puerperal fever,	1	1	2	1	2
Measles,*	15	9	18	11	28

* Measles is not notifiable.

Sanitary Department,
Glasgow, *29th September, 1897.*

THE

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ORIGINAL ARTICLES.

SOME OBSERVATIONS ON THE DIFFICULTIES OF DIAGNOSIS IN ABDOMINAL DISEASE, WITH BRIEF ACCOUNTS OF ILLUSTRATIVE CASES.[1]

By GEO. S. MIDDLETON, M.A., M.D., F.F.P.S.G.,
Physician to the Glasgow Royal Infirmary.

Gentlemen,—My first duty is to thank you for the honour you have conferred on me in electing me President of this Society. When I look back upon the men who have, within my own recollection, occupied this chair, I feel considerable diffidence in taking it to-night. I do so, however, in the full confidence that the kindly feeling which has placed me here will be continued to me during my term of office, and will help me in the discharge of the duties of the chair, to the successful conduct of which no effort will be wanting on my own part.

One of your President's first duties—prescribed or sanctioned by use and wont—is to inaugurate his term of office with something in the form of an address. In selecting as the subject of my remarks to-night the difficulties of diagnosis in abdominal disease, I have been guided chiefly by the fact that many cases have recently occurred in my wards which forcibly raised this question, but also by the belief that the question is one of great general interest. There is, indeed, a consensus of opinion in the profession that diseases of the abdomen are among the most difficult of diagnosis, especially in the case of tumours. Every now and again in general practice, and very frequently in hospital wards, abdominal cases are met with, the diagnosis of which remains for months, or even for ever, quite obscure.

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[1] An address delivered as President of the Glasgow Medico-Chirurgical Society, on 1st October, 1897.

The difficulties that we meet with may be divided into three groups:—

1. Difficulties arising on the part of the patient. It is often impossible to obtain a correct history of a case from the patient being ignorant, unobservant, or forgetful. We are very liable to be misled in this way, and I do not see that this source of fallacy can be altogether obviated. All we can do is to carefully cross-examine the patient, and weigh his credibility as well as we can.

2. Difficulties arising on the part of the physician. These are mainly of two kinds, either defective examination or an incorrect appreciation of some particular sign or symptom. I can recall many cases in which I have made these mistakes.

The most common and also the most striking example of defective examination that I can give you is that arising from failure to make a digital examination of the rectum, generally omitted from the fact that there are no signs suggestive of disease there, or, perhaps more frequently, because the signs that ought to suggest pelvic mischief are misinterpreted. I cannot insist too strongly on this point. Mistakes on my own part in the past have made me now make a rectal exploration a part of the routine examination of every obscure abdominal case. Within the past month I have seen several cases where this had not been done, and where the examination detected a hitherto unsuspected pelvic tumour, at once throwing light on the nature of the case.

So, also, mistakes frequently occur through failure to make *personal* examination of the alvine evacuations, &c.; through trusting to the reports of those in charge we may miss valuable aid which the discovery of blood, pus, &c., would give. Again, a case may present difficulties insuperable unless an examination is made under chloroform. The more we realise the necessity for thorough examination of all cases, the less frequent will be the errors arising from this cause.

3. The main difficulties, however, lie in the limitations that are imposed by nature on our means of examining the

abdominal viscera, and in the nature of the abdominal contents themselves.

When we remember the various contents of the abdomen, it is not surprising that their diseases are often obscure. Of the solid glandular organs met with there is none whose functions are fully known to us, and only one whose secretion is presented to us in a pure state for examination. While the physiological functions of the kidney are fairly well established, and its pathological states are generally well known, the same can be said of none of the other solid viscera. The hollow viscera, the peritoneal cavity with its various pouches, the mesenteries, and the omentum, all at times give rise to trouble in diagnosis, partly because they are so much in juxtaposition with each other and with the solid organs, and partly because of the mobility of the various portions of the alimentary canal. Think, for example, of the various positions in which the pylorus may be found—to right or left of the middle line, above or below the level of the umbilicus. I am often met with the statement that a tumour under examination cannot be pyloric because of its position, when a wider knowledge of what is met with at *post-mortem* examinations would have prevented such an objection being raised. The same is true of all parts of the intestinal tract, the extent to which displacements may occur being very remarkable, and frequently illustrated in the cases of the appendix vermiformis and of the transverse colon.

Physical examination of the abdomen is all but limited to palpation and percussion, and, while much may be learned by these, a consideration of the facts above noted readily accounts for the difficulties met with in physical diagnosis.

In many cases we have to trust much to the patient's account of his illness, which, as we have already seen, is often unsatisfactory, but which, even when given correctly in all its details, is often most misleading. A symptom, for example, that is most commonly enquired for is pain. The more I see of abdominal diseases, the less trust I can put in this symptom as a help in diagnosis. We are all familiar with the varieties of pain described as characteristic, say, of peritonitis, of gall-stone, &c., but do we all recognise as fully the fact that we may have these conditions present without pain at all, or with pain referred to some distant part? Are we all aware, for example, that we may have a ruptured bowel, with escape of the intestinal contents into the peritoneum and secondary peritonitis without pain, even though life has been maintained (with full consciousness) for hours or days? Some of the cases that I am to narrate to-night illustrate the little reliance that is to be placed on this symptom.

Apart, then, from our general knowledge of the typical features of the various visceral diseases, our diagnosis of the nature and seat of an obscure abdominal affection must depend upon our acquaintance with what one may call the vagaries of these disorders, and it is only from the records of cases whose diagnosis has been completed by operation or by *post-mortem* examination that such an acquaintance can be obtained. To illustrate all these vagaries in one paper is impossible; the varieties of appendicitis alone could not be discussed in such a space. Believing, however, that concrete examples of mistakes in diagnosis teach us more than abstract discussions of the difficulties, I would now ask your attention while I record a few of the cases that have puzzled me. In going over the material at my disposal for this purpose, I have had to make a selection, and I shall confine myself to-night to two classes of cases. I shall endeavour to lay them before you just as they struck us at the bedside, and then to show how the *post-mortem* examinations revealed conditions hitherto more or less unsuspected.

The three cases that I wish to bring before your notice first illustrate a not infrequent source of confusion, viz., that arising from the symptoms and physical signs leading to an erroneous conclusion that either a chief part, or the whole, of the disease is thoracic. There is nothing new in what I am directing attention to; but, while various special volumes on abdominal diseases have emphasised such occurrences, I do not think that their frequency and importance are sufficiently recognised in text-books and by the profession generally.

The first two of these cases are examples of the most common variety, viz., the simulation of pleural effusion.

CASE I.—*Purulent peritonitis—Large subhepatic abscess simulating pleural effusion—Collections of pus in pelvic cavity and in right and left iliac regions—Pus in gall-bladder—Pus in Fallopian tubes.*

A woman, 45 years of age, was admitted into my ward on 6th January, 1897, complaining of general weakness, sickness, vomiting, and diarrhœa. She stated that her illness had begun six weeks before with sudden pains in the abdomen, quickly associated with vomiting and diarrhœa. The pain in a couple of days was "unbearable," and the vomiting was so urgent that "nothing would lie on her stomach." All the symptoms had abated under treatment.

Such was the statement of the case by the patient, who looked very ill. The cheeks and brow presented a brownish colour, but there was no pigmentation in the buccal mucous membrane or elsewhere abnormally, the skin generally and the lips being decidedly anæmic. She said she had lost a great deal of flesh, but she did not show great emaciation.

The abdomen was tympanitic all over, and some gurgling could be felt and heard on palpation, which elicited slight general tenderness. The hepatic dulness was normal, as also was the splenic. The abdomen was noted to be otherwise quite normal.

The percussion note in front of the right lung was of a somewhat dull tympanitic quality, and the respiratory murmur was rather weaker than on the left side. Behind, the percussion note on the right side was relatively dull from the angle of the scapula downwards, and the respiratory murmur was weaker than on the left side, while the vocal resonance was stronger, and the vocal fremitus about equal on the two sides. There were no râles anywhere; she said she had had no cough or difficulty of breathing, but speaking evidently caused her to be very short of breath.

Her general condition was bad. The pulse numbered over 130, and was small and easily compressible. The respirations numbered from 22 to 30. The temperature, on admission, was 99·6°, and it tended to vary from that to about 101°.

Two days later it was learned from the husband that the illness had begun with pain over the lower ribs on the right side, and that at a later date the pain had passed down into the abdomen; and also that she had had a slight cough, with a somewhat white tenacious spit. The diarrhœa of the onset had been easily controlled by medicine, but had again recurred a fortnight before admission, and evacuations had been passed in bed without notice. She had lost flesh greatly.

The case puzzled me. I had no personal evidence of abdominal disease, and the only abdominal symptom was diarrhœa. The oscillation of the temperatures rather suggested enteric, but there were no spots, the stools were not characteristic, and the abdomen was not distended. A rectal examination also failed to throw any light on the case.

Taking everything into account, it seemed that the most probable cause of her condition was something in the right pleural cavity, probably an encysted empyema. On 9th January, therefore, an exploration of that cavity was made with trocar and cannula, but absolutely nothing came away, and I was as much in the dark as ever.

On 10th January, a letter was received from Dr. Blackwood, who kindly wrote giving us information as to her previous condition. On 1st December, 1896, he saw her suffering from sickness, abdominal pain, fever, and constipation. Enemata failed to give relief to the bowels, and tympanites came on about 13th December. On 15th December she had a severe rigor, after which the temperature, formerly about 102°, rose to over 104°. Under treatment the dangerous symptoms passed off about the 19th December, and up to the end of the month she improved still further, the tympanites disappearing. During January the temperature had risen two or three degrees every evening, and the bowels had become loose.

Dr. Blackwood regarded the case as one of peritonitis, having carefully excluded enteric fever.

Repeated examinations of the abdomen failed to detect anything abnormal except an indefinite sense of resistance on deep palpation above Poupart's ligament on the right side.

This patient showed no attempt at improvement. The temperatures ranged from 99° to 101° up to the 17th January, but after that date they were practically normal. Diarrhœa persisted, but vomiting was only occasional. On 9th January œdema was noted in the arms about the elbows, and it gradually affected both arms and both legs, but was never very excessive, and was always greater in the arms than in the legs. The urine contained but a trace of albumen, but it always deposited some black crystals of melanin or pyrocatechin, and was very acid. She was free from delirium up to the morning of her death, which took place on 22nd January.

I went to the *post-mortem* examination with no better diagnosis than that she had died of septic poisoning arising from some cause unknown.

The lungs and pleural cavities were found to be normal, but the abdomen was the seat of a purulent peritonitis. The intestines were firmly matted together and to the omentum, and there were several collections of pus. The largest was situated under the liver, but there were several foci of pus, especially in the right and left iliac regions and in the pelvis. The gall-bladder was greatly distended with pus and bile, and six small stones were found in the common bile-duct. There was no abscess within the liver, and no opening connecting the interior of the gall-bladder with the subhepatic abscess. The uterine and vaginal walls were normal in appearance, but both Fallopian tubes were impervious to a bristle passed from the uterine cavity, and in their outer ends collections of pus were found. The appendix vermiformis was adherent, but there was no pus about it.

Now, even with the aid of the *post-mortem* examination, it is not clear where the disease originated. It may have commenced as a suppuration set up in the gall-bladder by the presence of stones, but in that case it is difficult to account for the other facts in the absence of any direct connection between the cavity of the gall-bladder and the subhepatic abscess. It is much more probable, I think, that the primary suppuration took place in the Fallopian tubes, probably as the result of gonorrhœal infection, and that septic infection followed.

In this case, an incorrect statement of the facts on the part of the patient and her husband, and the misleading nature of the physical signs (absence of those of peritonitis) when she came under my care, led to an incorrect diagnosis of effusion in the pleural cavity.

CASE II.—*Tumour of the right suprarenal capsule simulating pleural effusion—Thrombus of inferior vena cava—Thrombi in both branches of the pulmonary artery.*

A miner, 41 years of age, was admitted on 13th March, 1895, complaining of cough and spit, pain in the right side, and occasional swelling of the legs and feet.

Since the New Year he had been feeling out of sorts, with pain across the lumbar region and some cough and spit. Four weeks prior to admission he took to bed, largely on account of a sharp pain in the right side, aggravated by coughing and deep inspiration and also by lying on the left side. He had lost flesh and colour, being emaciated and pallid, but without any pigmentation of the skin. There was slight pitting on pressure over the right foot.

There was apparently evidence of pleural effusion on the right side, which, just below the nipples, was larger by half an inch than the left, and dull up to the sixth dorsal vertebra, the respiratory murmur being lost over the dull area. Further evidence of this supposed effusion was found in the facts that the hepatic dulness reached nearly to the umbilicus, and that the cardiac dulness in its lower part seemed displaced to the left.

The temperatures were normal or subnormal, and for a week or more he seemed to improve, and the effusion seemed to be disappearing, as friction became audible all over the dull area behind. But, curiously enough, the right side continued larger than the left (at level of nipples, 18 inches to 17 inches, and 3 inches below the nipples, 19 inches to 17½ inches), and the lower border of the hepatic dulness remained at the level of the umbilicus.

The question of empyema was raised by the fact that there was a localised bulging in the right lateral region, and an exploratory puncture was thought of, but decided against, as it was finally concluded that the evidence of effusion was defective, while the liver was clearly much enlarged.

By the beginning of April there was well marked œdema of the right leg, and to a less extent of the left, without any evidence of thrombosis in the veins. There was then also tenderness over the dull area in the right lateral region, and more distinct bulging. Emaciation increased with great rapidity. From 28th March the temperature had oscillated a little, from about normal to about 100°, the absolute maximum recorded being 100·8° on 2nd April. From 4th April onwards, the temperatures were always subnormal. The abdomen became more swollen in the hepatic region, the right leg became very highly œdematous and painful, and the left more œdematous also. He died on 7th April. The course of the case gave rise to a diagnosis of malignant disease, probably of the liver, and involving the right pleura secondarily.

The examination after death found both lungs firmly adherent to the chest wall by old fibrous bands, and highly œdematous. On laying open the pulmonary artery in both lungs large adherent pale-yellow granular thrombi were found, perfectly occluding the lumina of several of their large branches. The vena cava superior was normal, as was also the heart, which was free from thrombi.

The stomach was greatly dilated, and contained a large quantity of dark coffee-ground fluid. Its mucous membrane was normal. The liver was pushed forwards and downwards, but did not seem to be greatly enlarged (50 oz.) On turning upwards its under surface a very large tumour was discovered, occupying the region of the right kidney. The posterior portion of the under surface of the liver was found to be adherent to the upper end of the tumour. Upon dissection the whole inferior vena cava was found to be occluded by thrombus, and the vessel was greatly distended thereby, so as to resemble a sausage. The thrombus extended into the left renal vein, and into the iliacs and femorals on both sides, but was evidently much older in the right femoral vein; the saphenous veins on both sides were also involved.

On removing the tumour, which was the size of a child's head, somewhat quadrate in shape, it was found to be situated between the lower surface of the liver and the upper end of the right kidney—*i.e.*, in the situation of the right suprarenal capsule. Both kidneys were quite healthy, and the left suprarenal capsule was normal. On cutting into the tumour, it was found to consist of rounded areas of yellowish, somewhat caseous, and broken-down-like tissue, interspersed with hæmorrhagic areas. It was kept for further dissection, but has unfortunately been mislaid, so that no further examination has been made.

Here, again, we find that a suspected pleural effusion did not exist; and that an apparent pleural friction had been caused, no doubt, by friction between the upper end of the tumour and the lower surface of the liver before the two became adherent. But another error in diagnosis was made, for there was no enlargement of the liver. That organ had been rotated on its long axis by the pressure of the tumour, so as to be depressed, and to give rise to the impression that it was much enlarged.

It is also worth noting that I failed to give due weight to his statement, that lying on his left side increased his pain. The pain of a pleurisy is increased by lying on the affected side; while the pain caused by an enlarged liver is generally increased by lying on the left side. This feature of his pain, therefore, should have made me suspect that the seat of the pain was below the diaphragm.

The third case is of a much more uncommon kind, the subdiaphragmatic disease having given rise to an erroneous diagnosis of pleuro-pneumonia and pericarditis.

CASE III.—*Perforation of latent gastric ulcer with subdiaphragmatic abscess simulating pleuro-pneumonia and pericarditis—Diaphragmatic pleurisy—Pelvic abscess.*

On 18th November, 1895, there was admitted to my female ward a domestic servant, 17 years of age, sent in by Dr. M'Pherson, Cambuslang, as "suffering from peritonitis and pleuro-pneumonia, the cause of the peritonitis being rather obscure." With this diagnosis I entirely concurred. The abdomen was distended, especially below and to the right of the umbilicus. There was tenderness in the epigastric, hypogastric, and umbilical areas, the epigastric and umbilical being most tender. There was impairment of the percussion note in the direction of dulness in the hypogastric and iliac regions, while quite a drum-like note was obtained over the rest of the abdomen, especially in the epigastrium. The abdominal wall was nowhere absolutely rigid, but it was relaxed only in the flanks and in the epigastrium. Nothing was discovered on palpation, except that steady pressure tended to relieve the pain, which was no longer very acute. Over almost the lower half of the left lung behind there was relative dulness on percussion, with marked increase of vocal resonance, tubularity of the respiratory murmur, and a crepitus regarded as partly intra-pulmonary, though probably in part friction; in the left lateral region there was very coarse pleural friction, and only a very little intra-pulmonary râle; while over the lower part of the lung in front the signs were less marked.

The temperature was 103° F.; the pulse 122, regular and of rather high tension; and the respirations numbered 36 per minute, and were not very shallow. The face was flushed and anxious looking. Enquiry into the history did not discover any sufficient cause for her very serious condition.

Up till 10th November she had been in her usual health, that of an anæmic girl suffering from irregular menstruation. On that date she had a sudden sharp pain in the left side of short duration. She then remained well till the evening of 15th November, when the same kind of pain recurred in the left side, relieved by removing her stays.

On 16th November she was suddenly seized with severe pain in the upper part of the abdomen and in the left side.[1] She had to go to bed at once, and could scarcely breathe on account of pain.

She had had to lie on her back with the knees drawn up. Poultices and turpentine fomentations gave her great relief.

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[1] Dr. Peter A. Laird, who was then acting as assistant to Dr. M'Pherson, was good enough, some ten days later, to send me a note of his observations on this case, and it will be seen that his account differs considerably from that of the patient. "She had always been healthy up till 10th November, when she complained of an attack of acute pain in the belly, which, however, quickly passed off after a dose of castor oil, without leaving any symptoms behind. Although very anæmic, she was always able for her work, and is said to have never previously complained of indigestion or any pain about the stomach. From 10th November till the evening of the 15th November she was doing her work as usual. On the 15th November she had eaten a considerable amount of shortbread and other pastries (home made), and in the evening was suddenly seized with acute pain, which began in the left side and gradually extended over the whole abdomen. There does not appear to have been any collapse produced. Hot poultices were applied and castor oil administered. On this occasion the oil was vomited, and retching continued at intervals, usually most severe shortly after nourishment had been swallowed. More aperient medicine was administered on several occasions between the 15th November and the 17th November, but up till that date there had been no passage, even of flatus, and the vomiting still continued. The pain in the belly was somewhat spasmodic; that in the side was more constant.

"I was sent for on the morning of the 17th November, and found her

She had vomited repeatedly with much retching, the vomit consisting of curdled milk and bile. The bowels had not moved for several days till the day before admission, when there had been two motions under the influence of purgative medicines and five enemata.

The patient was evidently extremely ill. Nothing could be discovered to account for the apparent simultaneous involvement of the peritoneum, the pleura, and the lung. On the day after admission, and on the succeeding days, she had frequent loose yellow motions; but no spots were ever seen, and the diagnosis of enteric was never seriously entertained.

On 21st November it was noted that the *facies Hippocratica* was becoming more marked, and there were increasing signs of mischief in the right iliac region, dulness, and sense of resistance extending now to above the level of the umbilicus, while on the left side the sense of resistance was limited to an area extending for 2 inches only above Poupart's ligament. No complaint was made of pain on examining the abdomen, but she had had 40 minims of laudanum in the preceding sixteen or eighteen hours. There had been no vomiting. On the same date, while the signs of left basal pleuro-pneumonia persisted, I detected some dulness at the right base and a very extreme enlargement of the cardiac dulness, which reached almost to the left sterno-clavicular articulation, somewhat to the right of the middle line at the level of the fifth costal cartilage, and well to the left of the nipple line in the left lateral region, where it merged in the lateral dulness 1 inch above the level of the left nipple. The cardiac impulse was felt from the first to the fifth left intercostal space, without apparent loss of strength in the normal situation of the apex.

with a temperature of nearly 103° F. There was well-marked general and uniform distension of the abdomen. On light pressure there was very little tenderness; but on deep pressure the patient complained of pain, especially in the lower part of the belly. No induration could be felt in any part, and on percussion a tympanitic note was got over the whole abdomen. The abdominal respiratory movements were normal. The patient could extend her legs fully without any discomfort, and seemed to feel no inconvenience from the pressure of the bedclothes.

"There was nothing abnormal found about the heart, except the excited action resulting from the constitutional disturbance.

"Over the site of the continuous pain on the left side (*i. e.*, on a level with the base of the left lung) the breathing was harsh, and the respiratory murmur seemed prolonged. In addition there was an occasional crepitus heard, and at times the rasping nature of the sound suggested friction. Several large enemata were given, but no satisfactory motion was passed, and there was no diminution of the tympanites.

"On the 18th November the general symptoms had somewhat improved, but otherwise her condition was practically the same."

The sounds were sharper at the base than at the apex, and over the manubrium there was a suspicion of pericardial friction near a spot where, on admission, Dr. Howat had detected a rough systolic murmur of very limited distribution (which I had failed to corroborate).

The temperature varied generally between 102° F. and 103° F., seldom falling as low as the one, and only twice reaching above the other. There were no rigors or profuse sweatings.

The case was regarded as almost certainly a perityphlitis or appendicitis, with left pleuro-pneumonia, and with probably pericarditis, the whole suggesting some septic poison affecting chiefly the serous membranes. As the abdominal condition seemed the more urgent, she was transferred to a surgical ward. There, the evidences of thoracic disease being very marked, while the abdominal ones seemed to diminish, and her general condition being very bad, no operation was performed. The diarrhœa continued, the weakness increased, and she gradually sank and died on 25th November, the temperature having reached 104·4° shortly before the end.

The *post-mortem* examination revealed an unexpected condition of affairs. On opening the abdomen a large quantity of pus escaped from a cavity bounded above by the diaphragm and below by liver, stomach, pancreas, &c. This large abscess was due to the perforation of an ulcer in the anterior wall of the stomach, 1 inch below the lesser curvature, and a little nearer the pyloric than the cardiac end. On the upper surface of the left lobe of the liver and on the corresponding diaphragmatic surface there was a thick layer of fibrino-purulent exudation.

In the right iliac fossa and in the pelvis another large collection of pus was met with. Careful examination failed to discover any connection between the two abscesses, and there was nothing abnormal about the uterus or its appendages. The cæcum and the appendix were healthy. The intestines generally were matted together by recent peritonitis, but were healthy throughout.

The pus contained streptococci and a bacillus whose identity was unknown.

The pericardium was normal, but contained about 6 ounces of clear serum. The heart was normal.

Both lungs were collapsed, the left much more than the right. Both were forced upwards by the bulging of the diaphragm, and were firmly adherent to the diaphragm from recent pleurisy. The left lung was distinctly œdematous.

I think you will agree with me that this was a case the complete diagnosis of which was scarcely likely to have been made. I do not think that it ever occurred to me that the origin of the trouble might be found in the rupture of a gastric ulcer, but that explanation had presented itself to Dr. M'Pherson.

Careful enquiry made during life, and again after the results of the *post-mortem* examination were known, failed to discover any history of symptoms that might have been indicative of gastric ulcer. It may well, therefore, be described as a case of latent ulcer, and I think we may infer from the history that the rupture took place in two stages, as it were—viz., first, on 10th November a slight oozing, sufficient to gradually set up some adhesions, and then, on 15th November, a more definite rupture leading to the large abscess which was found below the diaphragm.

Those of you who are interested in the diagnosis of sub-diaphragmatic abscess caused by rupture of gastric ulcer will find the subject treated in a very interesting manner by Dr. Samuel Fenwick in his *Clinical Lectures on some Obscure Diseases of the Abdomen*, and you will there find that such an abscess frequently gives rise to signs suggestive of pleural effusion or of hydro-pneumo-thorax, the latter due to the escape of gas from the stomach. In this case, however, the signs never suggested a pleural effusion, but consolidation with dry pleurisy. Now, while the examination revealed recent adhesions between the pleural surfaces at the base of the lung and over the diaphragm, there was nothing there to cause the coarse friction so abundantly heard, and the collapsed condition of the lungs scarcely accounted for a tubular respiratory murmur. What we believed to have been pleural friction was in reality due to the rubbing of the roughened surfaces of the liver and the diaphragm, and I can account for the tubularity of the respiratory murmur only on the supposition that during life the lung condition must have resembled condensation from pressure, for there was certainly no pneumonic exudation.

Again, the heart and the pericardium practically were found in a normal state, and yet the signs during life were such as to raise the question of pericarditis with effusion. It is difficult to explain this. All that I can say is, that no doubt the physical signs we noted were due in some way to abnormal tension of the parts due to pressure from below the diaphragm, and to displacement of the heart from the same cause—static and dynamic conditions the effects of which cannot be tested by the facts as observed at a *post-mortem* examination.

Other interesting points in this case are the occurrence of so much internal suppuration without rigors, profuse sweating, or marked oscillations of the temperature; the presence of an iliac and pelvic abscess without connection with the subdiaphragmatic one, a metastasis which cannot be referred to absorption by the lymphatics, and scarcely even to septic poisoning, as it would appear that it was one of the early features of the case; the absence of collapse at the moment of rupture, and the duration of life after it, both no doubt due to adhesions having formed so as to limit the dispersion of the escaping contents of the stomach.

A point of minor interest is that this case illustrates the well-known fact that it is ulcers on the anterior wall of the stomach which are most likely to be latent, and which most commonly lead to rupture, the latter owing to the difficulty with which they form adhesions to the neighbouring parts.

Other varieties of thoracic disease are at times simulated by abdominal affections. Thus, I remember a case that was long treated as tubercular disease of the lung which proved, on *post-mortem* examination, to be a lung destroyed through the rupture into it of a perinephritic abscess through the diaphragm. Again, as I have already mentioned, Fenwick and others record cases of perigastric abscess giving rise to a mistaken diagnosis of hydro-pneumo-thorax, the gas escaping from the stomach into the abscess giving a well-marked Hippocratic succussion.

There are, no doubt, other sources of confusion to which I have not adverted, but the above are sufficient to show that mistaken diagnoses of this nature are liable to be of not infrequent occurrence. Let us hope that to be forewarned is to be forearmed.

I must now, in a word, remind you of the converse of these cases—viz., the many instances in which thoracic affections are ushered in with symptoms suggestive of abdominal disease. Thus, in many cases of basal pneumonia and diaphragmatic pleurisy, the initial symptoms are pain referred to the abdomen, severe and persistent vomiting, and sometimes collapse—the classical features of a peritonitis. In these cases, however, as a rule the diagnosis is in doubt only for a day or two—till the physical signs are fully established. In abdominal cases, however, the mistaken diagnosis may be adhered to for weeks or months, nothing occurring to lead to its correction.

The second difficulty that I wish to speak of is that of determining whether an abdominal tumour is malignant or not. This question often arises, and I venture to think that we have all made mistakes, both in saying that a tumour was malignant when it was not, and in saying that it was not when it really was. The two following cases will show how easily a mistaken diagnosis may be made.

CASE IV.—*Jaundice from gall-stones, with greatly thickened omentum simulating malignant disease of the liver, apparently confirmed by discovery of a pelvic tumour.*

A woman, 56 years of age, was admitted on 14th August, 1897, suffering from severe vomiting, jaundice, and weakness. The jaundice was considerable, but an almost more striking feature was the sunken state of the eyes and the anxious expression of the face.

The abdomen was greatly distended, but there was some doubt as to whether there was much fluid present in the peritoneal cavity. The liver seemed to be enlarged downwards. The upper border could be made out by percussion to lie in the sixth intercostal space in the nipple line, but percussion failed to demarcate the lower border. On deep palpation in the epigastrium a large solid mass was felt, which could be traced almost down to the umbilicus. Its surface could not be accurately felt, and no defined lower border could be made out. Repeated examinations led to the conclusion that this was probably liver, but the possibility of its being omental was entertained. No nodules could be felt anywhere. The spleen could not be felt, but splenic, cardiac, and hepatic dulnesses coalesced. The urine was highly bile-stained, scanty, and contained a little albumen and numerous hyaline and granular and epithelial casts. The heart was normal.

There was very constant vomiting; the vomited matter was not abundant, but it was grumous in appearance, and gave the blood reaction with guaiac—confirmed by the discovery of blood corpuscles by the microscope.

The history bore that about the end of June she began to feel discomfort after food; later she had actual pain, and a few days later she had vomiting. Loss of flesh then occurred. She could not say when the jaundice had been first noted.

There was no history of tippling, and nothing specially to suggest that we were dealing with cirrhosis of the liver. Careful inquiry failed to discover any history of hepatic colic. Though she had had pain in the epigastrium and about the liver, she had evidently never had a severe paroxysm. We therefore excluded gall-stones as a cause of her disease. The woman's age and her appearance suggested malignant disease as the cause, and this seemed to be confirmed by the presence of blood, though in small quantity, in the vomited matter.

On 17th August, as no motion of the bowels had taken place, and as only a little fluid could be injected into the bowel, a digital examination of the rectum was made, and a hard mass was felt in the pelvis, apparently lying between the rectum and the uterus, and almost completely occluding the rectum. The finger could discover no involvement of the mucous membrane of the rectum or of the vagina, but the impression left by the hardness of the mass and by the presence of a small hard nodule near it, was that I was dealing with a considerable tumour, and that a malignant one.

No more complete proof of the malignant nature of the disease could have been looked for.

Vomiting persisted. She was unable to take any food. The bowels never moved. The urine averaged about 18 oz. daily. The temperature was generally normal or subnormal, the lowest record being 97·4° (on admission) and the highest 99·2°—the only occasion on which it reached above 98·6°. She was very sleepless, for which she got some opium. Gradually sinking, she died on 21st August.

Examination of the body showed that there was no enlargement of the liver. What we had taken for liver was omentum, which was drawn upwards and much thickened, so as to be mistaken for the liver when the body was opened. It felt to the hand like a hard cake. On section it cut with a feeling of density, but the naked eye could discover no malignant disease in it, and this was later confirmed by the microscope.

The jaundice was due to gall-stones in the common duct. The gall-bladder was contracted, its walls much thickened, and its cavity full of large gall-stones. It was adherent to the liver. Gall-stone, therefore, was the cause of the jaundice.

The pelvic tumour resolved itself into inflammatory thickening, with enlargement of some of the glands. The lower portion of the bowel, the uterus and vagina, and the bladder were matted together by old adhesions. The bowel was found to be twisted together into an S shape, and so compressed by thickened tissues and so distorted as to be all but completely obstructed. Microscopic examination proved what the naked-eye could not tell—that there was no malignant disease. There was no history of any old-standing pelvic mischief. She had had eleven children and two miscarriages, but she gave no account of any uterine or other disease of the pelvic organs. The source of the pelvic disease is therefore still unknown.

CASE V.—*Gall-stones with enlargement of gall-bladder and of liver—Obstruction of pylorus with dilatation of the stomach —Simulation of malignant disease.*

A man, 55 years of age, was admitted on 14th October, 1893, complaining of pain in the right side, jaundice, cough, and shortness of breath.

The pain in the right side began three months before admission, had never entirely ceased, and had occurred at times in severe paroxysms of a few minutes' duration. The pain had never shot down towards the umbilicus, but it did shoot through to his back.

Jaundice was only of ten days' duration, and was deepening in colour.

There had been obstinate vomiting for three weeks.

For three years he had suffered from winter cough and shortness of breath, and these were troubling him considerably at the time of his admission.

He had been losing flesh for a year.

The liver proved to be considerably enlarged. In the nipple line the upper border of dulness was found 1 inch below the nipple, while palpation discovered the lower border 7 inches below that. In the parasternal line the measurement was 8 inches, there being a projection from below the border of the liver of a pyriform shape, and with the feeling of an enlarged gall-bladder. The examination elicited considerable tenderness over the whole hepatic area, but especially over this enlarged gall-bladder. There was no irregularity of the surface of the liver. The spleen was not enlarged. There was well-marked evidence of dilated stomach, and on several occasions sarcinæ were found in the coffee-grounds vomit and in the washings of the stomach.

The patient showed no tendency to improvement. He could not take food; the bowels were very constipated. The temperature only twice reached above 99·2°, and the maximum was 100°.

He was gradually losing ground, when, on 30th October, he became suddenly comatose, and died.

This was regarded as a case of malignant disease. While the history of pain was quite consistent with a hepatic colic, and the distended gall-bladder suggested an impacted gall-stone, other facts tended to the diagnosis above named. Jaundice had not immediately followed on the painful attacks, but was only of ten days' duration; the liver was much enlarged; and there was a greatly distended stomach. This latter fact at once suggested a primary cancer of the pylorus, and the occasional coffee-grounds appearance of the vomit tended to support that view, even though the presence of blood-corpuscles was not recognised by the microscope.

The examination of the body failed to discover any malignant disease anywhere.

The stomach was greatly distended owing to a tight stricture of the pylorus, due to the latter being dragged up and adherent to the gall-bladder, and not to any disease of its mucous membrane. The omentum, the duodenum, and the pylorus were all adherent to the gall-bladder, which was very tense. On strong compression of the gall-bladder, a fluid, apparently a mixture of bile and pus, flowed from the hepatic papilla in the duodenum. In the gall-bladder, two rounded stones about the size of small hazel-nuts were found, not facetted, and there was none impacted in the duct, and no others were found in the intestines. The walls of the gall-bladder were thickened and rigid, and its internal surface resembled that of an atheromatous aorta. The liver was enlarged, weighing 88 oz. The pancreas was normal. Nothing was found in the brain to account for the coma.

I presume that in this case the primary fact was the presence of gall-stones; that these had somehow set up irritation and suppuration in the gall-bladder; and that the inflammation had extended outwards, causing the adhesions that were so marked, and that led to the signs that supported the mistaken diagnosis. It is to be specially noted that there was no impacted gall-stone. The jaundice was due to constriction of the gall-ducts from the matting of the parts.

These, gentlemen, are the cases that I have selected as illustrative, and I would like to draw your attention to one feature common to them all—viz., the fact that without the *post-mortem* examination the diagnosis in every instance would still remain uncertain. I do not say that I made the most of the clinical facts at my disposal. It is quite probable that a critical survey of the detailed reports of the cases would show that in at least some of them I omitted to give proper weight to some sign or symptom that I had observed, and which, perhaps, ought to have led me to a correct diagnosis. I bring the cases before you, however, as cases observed with much more detail than is generally possible in private practice; and I feel sure that many of you must be able to recall cases more or less like some of them, in which, however, you had not the advantage of permission to examine the body after death. I hope that records such as these may tend not only to throw some light on past obscure cases, but also, by showing what various pathological conditions may be met with, to be of some help in the diagnosis of cases that may yet come before you.

THE HISTORY OF PATHOLOGY.[1]

BY CHARLES WORKMAN, M.D.

MEDICINE in the very earliest times of which we can get any record seems to have commenced along two lines. One of these, which we might name primitive surgery, was the treatment of injuries caused by accident or in battle with men or animals; in this case the cause of the lesions was readily seen and understood. But on the other hand, we find that our forefathers had to deal with many conditions of which the causes were to them absolutely unknown, or, at least, very obscure indeed; such conditions were the fever and delirium produced by wounds, the effects of some poisons, and zymotic diseases! These conditions were immediately ascribed by them to the malevolent action of the spirits of animals or men, the interference of the gods, or the power of witchcraft brought upon the invalid by his living enemies. And as these two lines of primitive surgery and primitive medicine were soon seen to have close relations, we find in very early times that a guild of medical practitioners arose specially trained to undertake the treatment of both these forms of disease; and as many of the diseases which they had to treat were supposed to be due to the anger of God, which must be appeased by sacrifice, this medicine-craft became often amalgamated with priestcraft. This was by no means always the case, as the medicine men in many countries remained quite distinct from the priests of religion.

Medicine having reached this stage made very little progress for a long time, and we find that among savage races the healing art is confined to a special guild of medicine men and sorcerers, or is in the hands of the priests to this day.

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[1] Address delivered at the opening of Session 1897-98, St. Mungo's College, Glasgow.

The delay in progress would seem to have been due largely to the superstition or reverence for the dead, which hindered anyone from making any anatomical investigation of the bodies of those who had died from disease or injury; and although a knowledge of the anatomy of animals was acquired at a comparatively early date, no one supposed that the information thus obtained could throw any light on the diseases and injuries of man.

A great advance would appear to have been made in very early times (three to four thousand years B.C.) in both China and Egypt, though this advance was almost wholly empirical, as very little was known in either country of human anatomy or physiology, and it was due apparently to the increase of practical knowledge of the effects of different drugs on the body. In Egypt, also, considerable dexterity was acquired in the treatment and diagnosis of disease of the eye and of the skin. But in spite of the knowledge which we might expect the people of that country to have obtained from the operation of embalming, no progress seems to have been made by them either in normal or pathological anatomy of the internal organs.

The first advance on the lines of anatomy seems to have been made by the early Greek physicians, though most of them only made dissections on the bodies of the lower animals. The advance made by Hippocrates seems to have been brought about chiefly by his wonderfully careful clinical observations.

Some three hundred years before Christ the medical school at Alexandria had broken through the barrier of reverence or superstition, and Herophilus and Erasistratus not only used the bodies of the dead for dissection, but it would even seem that they used condemned criminals for the purpose of vivisection. The latter (Erasistratus) also appears to have made *post-mortem* examinations on the bodies of persons who had died from disease, and to have observed and noted certain changes in the organs due to the disease, as he describes changes in the liver, &c.

For some four hundred years after this time medicine appears to have made little or no progress—that is, till the time of Galen; and, indeed, the knowledge of anatomy and pathology seems rather to have lost ground than to have advanced, though practical surgery and medicine advanced in an empiric fashion. Galen, however, was much in advance of his time, and though not a man of the type of Hippocrates nor of his ability, yet he made very considerable progress in anatomy by his dissections of the lower animals. He does not seem to have often dissected human bodies, for he mentions with surprise that those physicians who attended the Emperor Marcus Aurelius in his campaign against the Germans had the opportunity of dissecting the bodies of the barbarians slain in battle. His own description of the human hand is evidently taken from that of an ape with undeveloped *opponens pollicis.* Galen allowed his philosophical notions to outweigh the observation of nature, and he endeavoured to systematise his knowledge when he had far too slight data on which to found his systems, and thus in his writings we find much that is valuable and of interest among a mass of false and confused ideas of anatomy and physiology. His ability and personal power were so great, and his writings so voluminous and so much in advance of his time, that they became and remained the text-books of medicine and surgery for a thousand years after, and all medical writers were taken up simply with discussing and commenting on his works.

This condition of things lasted till the time of Vesalius and Harvey—that is, till the beginning of the seventeenth century —and it would seem to have been the study of anatomy and physiology which brought about the change. Harvey himself realised the value of careful pathological observation, for he states that he considered the dissection of one body dead of phthisis or of any lingering disease of more value than the dissection of ten hanged people.

An immense impetus was given to these studies by the improvement made about this time in the microscope as an instrument of precision, by the means of which such men as Hooke, Loewenhoek, and Malpighi added enormously to the knowledge of histology; and Loewenhoek may be considered the discoverer of those most wonderful creatures, the bacteria and infusoria.

In pathology the improvement shows itself first by the careful noting of *post-mortem* appearances and their relation to clinical symptoms found in the works of Bonetus, Valsalva, and above all of Morgagni of Forli, who may well be called the father of pathology, for his careful descriptions of clinical symptoms and of the related *post-mortem* appearances are of the greatest interest and value even to this day. His book on *The Seats and Causes of Disease* is a model of careful investigation well worth your study.

Giovanni Battista Morgagni was born in 1682. Following, and perhaps inspired by, the works of Morgagni, William and John Hunter set about making the most careful observations, the first chiefly in anatomy, the latter more in pathology, and, at the same time, they saw the importance not only of publishing their observations but of forming collections illustrating the experiments they made, and the facts which they had discovered. These collections remain as a grand memorial of their labours in the Hunterian Museums of Glasgow and London.

The Senate of the University of Glasgow has shown but little appreciation of the treasure left to its care by William Hunter, as it is only now beginning to put the collection in order, and make it available to our students; and the collection is even yet in a very unsatisfactory position in a badly heated and inefficiently lighted loft. It is also only by special grace that students can gain admission to the collection. The museum of a public institution such as the University should be thrown open not only to the students and teachers but to the public without fee or charge, as in this way their value would become more generally known, and those who have the opportunity would the more readily add to them and subscribe money for their better preservation and exhibition.

Since the time of the Hunters, who were born in the early part of the eighteenth century, John in 1728, very steady progress has been made in the etiology, pathology, and treatment of disease. It is curious to note that this revival of scientific investigation was first started in Italy by Morgagni, from which country the impulse passed to England and France, while Italy, for long after Morgagni, made no advance; then the impulse seems to have passed to Germany, and the great names in practical and experimental pathology with which we conjure now are German.

A few of these are of such importance that they may be specially mentioned. Cohnheim, of Leipzig, who has made his name known by his book on *General Pathology*, and by the work he has done in the experimental investigation of the subject; Robert Koch, the bacteriologist who has gained world-wide fame by his discovery of the bacillus tuberculosis and of the spirillum of cholera; and, above all, Rudolph Virchow, of Berlin, who has done such splendid work as is evidenced in his books on *Cellular Pathology* and *Die Krankhaften Geschwülste*, as well as in editing for many years the magazine which is known by his name, *Virchow's Archives*. He is by far the greatest living pathologist, and, in addition to all his labours in this line and as professor in the University of

Berlin, he is a politician and orator on the side of free thought and liberalism in the German Reichstag.

Another name is one much less known in this country, Bernard von Gudden, who was a martyr to his profession in that, when attending on the late King Ludwig of Bavaria he was drowned by him in the Stranberg Lake. His name is known, perhaps, mostly by his microtome for making brain sections, but he did enormous pioneer work in the study of the nervous system and its diseases, and was the first to use the method of following up the degeneration or want of development which follows the removal of a limb or organ, and thus mapping out the nervous centres which are connected with the functions of the part removed. He was, at the same time, most earnest and philanthropic in endeavours for the good of the insane under his care in the asylum at Munich. The name and follies of the king who drowned him will probably be remembered long after his name has "faded into the infinite azure of the past."

I wish to call upon you, my fellow-students of St. Mungo's College (for though a teacher I am still, I hope, your fellow-student), to take up the gauntlet for Scotland, not to rest idly on the laurels of your predecessors, but to determine that the next generation in Glasgow shall be more scientific, more hopeful, more brilliant than the past.

To turn now to the work done in the investigation of medical questions during the present century. One of the most important changes is as regards our view of the causation of some forms of disease, and from this to a certain degree there has been a considerable change in the method of treatment.

Up till a comparatively few years ago heredity was thought to play a very important part in the causation of such diseases as consumption (phthisis pulmonalis) and leprosy, as well as in cancer and sarcoma, which are still considered by many, if not most, pathologists to be greatly the result of hereditary tendency. In the earlier half of this century it was believed that this heredity was not merely the transmission of a tendency to the diseases phthisis or leprosy, but that the actual exciting cause was transmitted, just as at the present time it is believed that a father may transmit syphilis to his child without the mother being infected. Johnathan Hutchinson has stated quite lately that this is a frequent way for syphilis to be transmitted from parent to child. This idea, in the case of phthisis, was combated by Cohnheim and others before the germ of the disease had been demonstrated by Koch and

Baumgarten, and he came to this conclusion largely from his experiments on animals. He was so convinced of the purely infectious nature of the disease that he was able to prophesy that a germ would be found to be the cause some time before the bacillus tuberculosis was discovered. Other pathologists came to much the same conclusion as regards the fallacy of the view that heredity was the cause of that disease from very different data. My teacher, Professor Redfern, argued, from his experience, that the disease was produced by unhealthy surroundings, for if you breed rabbits in damp unhealthy hutches great numbers are sure to die from this disease, while if they are bred in dry hutches the mortality is greatly reduced, and he believed from this and from his observations of patients that where the disease appeared to be transmitted from husband to wife, or *vice versa*, this was due to the damp caused by sweating, as profuse perspiration is well known to be a common feature in this disease. We now know that in such a case the direct transmission of the germ is far more probably the cause, but the argument against heredity remains the same.

Again, the father of Sir William MacCormac, an old and highly educated Belfast physician, held the view that the cause of this disease was rebreathed air, practically that it was due to excess of carbonic acid, and he recommended everyone to sleep with the windows of their rooms open both above and below, in order that fresh oxygen might be admitted. And I remember well his telling me, when I called his attention to the discovery of the bacilli in the sputum, that these must be only accidental, as he had examined the sputum in a great number of cases and had never seen such a thing. He did not seem to realise that the power he had used was too low, nor did he understand the importance of proper staining, but he had come, from a wide experience, to see that the cause was from without, and that the disease was not a hereditary one. And now, to crown all, we have the clear experimental evidence that this disease can be produced by the inoculation of a pure cultivation of the bacillus, so that it is almost universally believed that heredity can only act in this disease by producing a weakness of the individual, and that a suitable soil is thus produced in his lungs for the growth and development of the germ.

In the same way, up to the present time, heredity was believed to be a prime factor in the causation of leprosy, but it is almost certain that this disease is produced by a very similar organism to that of tubercle, and that the reason why its infective nature was so long obscured was simply the very prolonged incubation stage. This incubation stage has been found to last several years.

In one case a soldier who had been in India, and was there, probably, exposed to infection, a year or two after returning to Ireland was attacked by the disease, and ultimately died from it. Afterwards, a friend with whom he had been living, but who had never been out of Ireland, developed leprosy. A number of similar cases have lately been published, notably that of Father Damien, which all go to prove the infectious character of the disease and its non-hereditary nature.

In the case of the malignant tumours the question is a much more difficult one, yet even here the importance of heredity, even as a predisposing cause, is coming to be doubted, for Snow argues that, if you inquire as to the family history of healthy persons you have as great evidence of cancer as you will find in the family histories of those who are cancerous. Practically, the fact is that everyone has some history of malignant disease if the family records be thoroughly investigated.

On the whole, I am strongly inclined to the view that we cannot blame our forefathers with our infirmities and diseases, but must put them down to some breaking of the laws of health, either in ourselves or in our neighbours, so that we become infected with disease of some kind.

In our knowledge of epidemic diseases great advance has been made within the last half century, both as regards their causation and the best means of putting a stop to their spread.

In olden time any systematic regulation of the treatment of the plague-stricken or of the bodies of those who had died from the disease was rendered impossible by the insane terror which took possession of the inhabitants of any affected town, as may be well seen from the description of the Attic plague given by the Greek historian, Thucydides, who was himself a sufferer; and even a few years ago, when cholera attacked Naples, the people fought with the sanitary authorities when they attempted to remove the sick to hospital for better treatment; and a similar difficulty was experienced in Bombay this year, the people endeavouring to hide the occurrence of cases of bubonic plague for fear of the sanitary regulations. Now, in civilised countries the people generally have come to realise that the spread of a plague is only encouraged by such demoralisation, and that their individual danger is enormously increased by it, so that it would be impossible for such a condition of things to occur among us, and this advantage was well seen a year or two ago when the cholera invaded Hamburg and caused terrible mortality—it was not looked upon as some dreadful incomprehensible scourge coming from the planet Mars or from elsewhere, and from which there could be no escape but in flight. The plague was calmly investigated, and proper means taken to stamp it out. Very soon this was accomplished, and the epidemic which seemed about to spread over all Europe was confined to the narrow limits of Hamburg and Altona.

In the early part of the century but little was known of the fevers typhus, enteric, and relapsing, and they were very completely confused with one another; this may be seen from our old pathological reports, where I find a case in 1852 put down as typhus which, on reading the account of the *post-mortem* appearances found in the intestine along with the report of the symptoms during life, was evidently a case of most pronounced enteric. In those days typhus appears to have been very common in Glasgow and all cities of like size, while now, that better sanitary arrangements have been obtained, both that disease and relapsing fever are very rare indeed; so much is this the case that you may probably pass through your course as students and obtain your diploma without ever having seen a case of either disease, and yet even in my student days in Belfast, which are not very long past, I saw many cases of typhus.

I am sorry that we cannot speak of a similar improvement with regard to enteric fever, which is still fearfully prevalent in spite of all our sanitary regulations and precautions, especially when they are not carried out, as has been the case just now at Maidstone.

And here I should like to call your attention to a rather remarkable fact which may or may not have some causal relation to this difference in the results obtained.

In enteric fever a definite germ has been found—the bacillus of Eberth—which has been almost certainly proved to be the exciting cause of that disease, while in the other exanthematous fevers—typhus, small-pox, scarlatina, and measles—no germ has been found which with any show of reason can be considered to be the cause of the disease. Along with this fact, it seems to me remarkable that enteric fever does not give such a pronounced immunity from a second attack as we find in these other diseases, and it does not seem to give rise to direct infection, but the disease appears almost always to be spread by means of food or drink.

Before passing from the subject of the fevers, I should point out a change in opinion among pathologists as to direct infection. Morgagni, in his book, states that he always avoided making *post-mortem* examinations in such cases for fear of infection, and this fear seems to have hindered many other earnest students as well as him from such investigations. Now, on the other hand, such an experienced physician as Dr. Wilks, of London, who was formerly pathologist to Guy's Hospital, stated that he had never known an infectious disease to be transmitted from a dead body by *post-mortem* examination, and for myself I certainly should not fear to make an inspection on any disease that I ever heard of or saw.

Enormous advance has been made of late years in our knowledge of nervous diseases, as I have already indicated in speaking of my old teacher, Professor von Gudden. This has specially been in the way of localising the seat of various brain diseases, and thus enabling surgical interference to be of use. As I have indicated, Gudden was a pioneer in this direction, but his work was followed up and improved upon by Munk in Germany and by Ferrier in this country, until now brain surgery has become so common and, by means of aseptics and anæsthetics, so safe as almost to be considered a minor operation.

Just lately a new line of research has been opened in nervous disease by the studies of Charcot and others into the nature of hypnotism, somnambulism, and allied states, and this may lead to an advance in our knowledge of pschycology and mental disease, which has been almost hopelessly obscure. I remember Huxley, in an address at Belfast, speaking of metaphysics as a useless study, for one might as well try to lift himself by the band of his trousers as hope to get any light by that study. If one uses a pulley it is possible to raise oneself by the bellyband, and it is just possible that in hypnotism and its allied states we may find a suitable pulley to raise us from our ignorance.

It is remarkable that there are remnants of ancient pathological philosophies and ideas still prevalent not only among the uneducated, but even among well-educated physicians and surgeons.

We often still hear ideas propounded that take us back to Galen and his four humours. We hear even doctors speaking of medicines that open or close the pores, thus to let out evil humours or to hinder the loss of good ones. And how very often do we hear both doctors and laymen talk of the liver as if it were some evil demon placed within us to destroy our happiness, and medicines are given to purge the liver or to soothe the liver, and men talk as if the whole function of this organ was to produce bile, while physiologists tell us that the production of this secretion is only a very slight and insignificant part of its duties, and as to the nature and method of its real work we are still sadly in the dark. When men speak of their liver being out of order, all that is meant is that they are suffering from one of the many forms of stomach or intestinal indigestion. The plan of blaming the liver may be a very nice way of soothing our patients and comforting them, but we should never let it blind us to the fact that it is merely a cloak for our ignorance, and though we may calm our patients by this means, we should endeavour to find out what is really wrong and, if possible, relieve it.

Another form in which ancient medicine remains with us is in the idea that patients are either sthenic or asthenic, taken from the medical philosophy of Brown, whose view was that disease is caused either by the fact that the vital force is in excess of or below the mean of health—in the first case to be treated by blood-letting and purging; in the other case to be treated by food and stimulants. This view has probably a certain amount of truth in it, at least in certain cases of disease. But it probably led to great injury when frequent bleeding was indulged in, as it used to be even a quarter of a century ago.

The medical philosophy of the *fin de siecle* appears to be the microbic origin of almost all diseases and their treatment by various kinds of antitoxic serum. Do not, however, be in too great a hurry to conclude that when you have found a special organism in the blood or tissues of a patient suffering from a peculiar disease, and that you can cultivate it pure in gelatine or agar, and further, that by inoculation of the pure cultivation you can produce similar symptoms to those of the patient in men or animals inoculated, that you have found out all that can be known of the disease and its causes; future years may show us that when we have found the germ we have only reached the bottom rung of a very long ladder.

The prospect, also, which seems at present to stretch before us, that we must have our children vaccinated and then injected with antidiphtheritic, antirabic, antisyphilitic, antimallic, and no one knows what other antitoxic serums, is to my mind anything but reassuring, and comes to look very much as if we were trending back to the old Galenical ideas of good and bad humours.

Gentlemen, although we sometimes, as in this serum craze, are apt to go faster than our knowledge or our experiments would warrant, yet, on the whole, in the course of the ages I am convinced that gradual progress is being made, and that we enjoy a much greater freedom from illness and from anxiety than did our forefathers of two hundred years ago, in spite of the fact that our progress in civilisation has added many new dangers, as well as making us realise more clearly the dangers which surrounded them and still surround us in the struggle for existence.

A few words now of welcome and of warning to those of you who are just commencing your studies in the medical profession. You are entering on a serious life work, which is almost certain to cause you great happiness or sore suffering, for I cannot think that any of you would take up such a profession simply for the purpose of pecuniary gain. If you are well equipped by your studies in the school and in the wards, you will have joy in the help you can give to your suffering fellow-creatures; while if you have idled away your student years, you will have the great sorrow of seeing those you should have aided suffering through your ignorance.

> "Geh! gehorche meinen Winken,
> Nutze deine jungen Tage,
> Lerne zeitig klüger sein;
> Auf des Glückes grosser Wage
> Steht die zunge selten ein;
> Du musst steigen oder sinken,
> Du musst herrschen und gewinnen,
> Oder dienen und Verlieren,
> Leiden oder triumphieren,
> Ambos oder Hammer sein."—*Goethe.*

OUR MOTTO—"῾ΥΠΗΡΕΤΑΙ ΦΥΣΕΩΣ."[1]

By WILLIAM FINDLAY, M.D.,
President, Glasgow Eastern Medical Society.

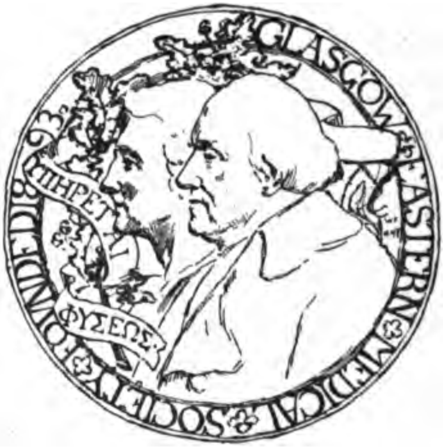
Allow me, gentlemen, in the first place, to thank you for the honour you have done me in electing me President of the Glasgow Eastern Medical Society. I can assure you I esteem it a very high honour indeed, and shall do my best to merit this expression of your confidence.

[1] Presidential address delivered before the members of the Eastern Medical Society, Session 1897-98.

In the matter of complying with the customary delivery of a presidential address, I must say, gentlemen, I was somewhat at a loss for a theme, one that would be at once sufficiently general in its character, and yet particular too, as bearing on the art of healing.

It occurred to me, however, in thus casting about in my mind for a topic which might worthily engage the interest of the Society for a little, that our motto—"Ὑπηρέται Φύσεως"—engraven on our new seal, might form a very fitting text for the subject-matter of an opening address.

I considered, moreover, that this might not be an inopportune time or way of handselling our new seal, gifted to us by the thoughtful kindness of the widow of our first president, Dr. George Mather, under whose genial rule and wise tact the Society passed most successfully through its infancy, and is now a tolerably healthy and prosperous body of four years old, and a membership of nearly a hundred.



SEAL OF THE GLASGOW EASTERN MEDICAL SOCIETY.

The illustration has been reproduced from the original design by Mr. William Findlay, artist, Glasgow, and reduced to the actual size of the seal.

The exceeding youth of our Society, and, consequently, the paucity of its achievements might, with more or less show of justice, be considered somewhat of a disqualification for possessing ourselves of a seal and motto. We had neither antiquity nor distinguished original service to recommend us, and it would be like putting the cart before the horse to take upon ourselves such investiture in the expectation that, if not antiquity, at least distinguished original service would naturally follow as the result of such action. I must admit I had considerable sympathy with that view of the subject myself when the propriety of possessing ourselves of a seal and motto was discussed in a former session, and postponed till some more convenient season. When, however, Mrs. Mather came forward a few months ago and asked the Society to accept the same from her, the Society, out of respect for the donor and the memory of her late husband, unanimously did so, without ever considering the question of propriety or their own worthiness in the matter.

And so, gentlemen, it has come about, after all, that we are pretty much in the same case as before—of the cart in front of the horse. We have still our spurs to win—our name as a Society to make, but I don't think, if we look at these symbols wisely, that they will be a hindrance to us; they may even be a distinct help; and this brings me to the subject of my address, our motto, "Ὑπηρέται Φύσεως," which signifies, "servants of nature."

This Greek aphorism of Hippocrates, which we have taken the liberty of putting into the plural, and which Professor Gairdner chose as the text of that most learned and philosophical address, "The Physician as Naturalist," he delivered before the British Medical Association at its meeting here in Glasgow, on 7th August, 1888—this Greek aphorism embraces the entire working creed of its venerable and venerated author.

The better to illustrate the light in which the Father of Medicine viewed nature and his own professional relationship towards her, and also as proving to ourselves the correctness of our interpretation of the words which we have adopted as our motto, let me quote one or two passages bearing on the point from the wise, and, at the same time, most delightful pages of Dr. John Brown's *Horæ Subsecivæ*.

1. "'Nature in man,' Hippocrates briefly says, 'is the aggregate of all things that concur to perfect health, and the foundation of all right reasoning and practice in physic.'"

2. "'Nothing,' says Dr. Adams, in his Preliminary Discourse to the Sydenham Society's edition of the *Genuine Works of Hippocrates*, translated and annotated by him, 'Nothing strikes one as a stronger proof of his nobility of soul, when we take into account the early period in human cultivation at which he lived, and his descent from a priestly order, than the contempt which he everywhere expresses for ostentatious charlatanry, and his perfect freedom from all

popular superstition. Of amulets and complicated machines to impose on the credulity of the ignorant multitude, there is no mention in any part of his works. All diseases he traces to natural causes, *and counts it impiety to maintain that anyone more than another is an infliction from the Divinity.* How strikingly the Hippocratic system differs from that of all other nations in their infantine state must be well known to every person who is well acquainted with the early history of medicine. His theory of medicine was further based on the physical philosophy of the ancients, more especially on the doctrines then held regarding the elements of things, and the belief in the existence of a spiritual essence diffused through the whole works of creation, which was regarded as the agent that presides over the acts of generation, and which constantly strives to preserve all things in their natural state, and to restore them when they are preternaturally deranged. This is the principle which he called nature, and which he held to be a *vis medicatrix.* Nature, says he, or at least one of his immediate followers says, is the physician of diseases.' "

3. " 'To imagine nature,' says Sydenham," the English Hippocrates, whom Dr. Brown declares held similar views as to nature and medicine as 'the divine old man of Cos'—" 'to imagine nature incapable to cure diseases is blasphemy; because that would be imputing imperfection to the Deity, who has made a great provision for the preservation of animal life.' "

4. " To the homœopathic delusion, or shall we call it 'persuasion,' whose chief merit and mischief it is to be 'not anything so much as a nothing which looks like a something,' we owe the recognition, in a much more practical way than before, of the self-regulating principle in living bodies—the physician inside the skin."

Now, in view of these weighty and pertinent quotations, defining at once the mental attitude of Hippocrates towards nature and nature's claim upon him and us as her devoted servants in the study and treatment of disease, I am not sure whether the adoption of this Greek aphorism for our motto is to be set down as an exhibition of our daring or our thoughtlessness; but if it is the former I think it augurs well for the future result. To proclaim ourselves the " servants of nature" —to take this motto as the badge of our calling—to nail our colours thus to the mast, so to speak, was not only a bold thing to do, but it was a course, at the same time, which carried with it considerable responsibility, because we will have to make good our words if we don't wish to become food for the mirth of our friends, or even to forfeit our own self-respect; therefore, it is in the sensitiveness—the quickness of our remembrance of this our act that the very stimulus will come to us to endeavour to walk up to it. If, then, our motto is a declaration of our creed—a confession of our faith, and the remembrance that we have made a deliberate choice of it an incentive to be true to it, and hence worthy of it, surely the heads of the "Two Great Scotchmen," William and John Hunter, engraven on the face of our seal, ought to be a further stimulus to strive to be the thing we proclaim ourselves, "servants of nature;" for such were the brothers Hunter, especially John, in a pre-eminent degree; as it was by virtue of them being so that they were able to achieve so much in revolutionising the medicine and surgery of their day.

It is, therefore, most fitting that we take John Hunter, whose strong face is continually looking up at us out of our seal, as the very highest and most fruitful type of our motto. As a boy John Hunter was a born naturalist (servant of nature) long before he ever dreamt of medicine as a profession, or cabinetmaking either. While living at Long Calderwood, his father's farm, if he was deplorably ignorant of the simplest rudiments of education, being unable either to read or write at the age of 17, he could read not "a little in nature's infinite book of secrecy." Dr. Mather, in his most eloquent memoir of him, written in the spirit of genuine hero-worship, tells us that if school had no attractions for him as a lad, he was a most profound student of that larger school, *Nature*, whose devoted and passionate servant he was, using his keen young eyes in the patient observation of all her intricate ways and mysterious processes, whether relating to birds, beasts, or vegetable life; and, out of his observations, setting his eager young intellect many dark problems to solve. His own words are, "When I was a boy I wanted to know about the clouds and the grasses, and why the leaves changed their colour in the autumn; I watched the ants, bees, birds, tadpoles, and cadis worms; I pestered people with questions about what nobody knew or cared anything about." And as this was the passion of his boyhood, so was it of his more mature and later life. He was constantly pursuing his multifarious studies in natural history alongside of his ordinary professional work. While serving as an army surgeon in the Peninsula, we find him making experiments on snakes and lizards to ascertain whether digestion was carried on during hibernation, and instituting inquiries into the faculty of hearing in fishes. As a rising and busy London surgeon he is not less devoted to natural history pursuits, spending the surplus of his large income and even borrowing money to gratify his passion in this direction, his house in Earl's Court being a perfect "Zoo." In his correspondence with his former pupil, Jenner, we get some idea of the comprehensiveness of these studies. He asks him if he has any large trees of different kinds that he can make free with, as he wishes to put him upon a set of experiments with regard to the heat of vegetables; also, similar questions in regard to bats and hedgehogs, and also birds, bees, reptiles, and fishes, information concerning whose habits he wanted. But, indeed, he was never tired prosecuting inquiries of this sort into all branches of natural history, and making them yield up their secrets by patient and repeated experiment, which knowledge he afterwards turned to the good of mankind in the exercise of his art. I am satisfied this training John Hunter had as a boy in nature's *Alma Mater* at Long Calderwood was infinitely better for him than would have been one purely of Latin and Greek for the work he was afterwards called upon to perform in the realms of physiology and pathology. And I am also satisfied that had John Hunter never left his father's farm, unlettered as he was, he would still have become both a remarkable and notable man in the district of East Kilbride as a naturalist. His name would have been handed down to us like that of the Banff shoemaker-naturalist, Thomas Edwards; and I could even imagine a learned University honouring itself by conferring a degree upon him, in recognition of his genius and researches, as one of the greatest of self-made "servants of nature."

It is in this aspect of John Hunter's character, as a waiter on, an observer, a student, an interpreter, a minister, a servant, in short, of nature, and with which we, as members of this Society, have proclaimed ourselves by our motto to be in sympathy, that the hope, as you are well aware, of all true progress in medicine lies. Such, indeed, has been the case down from the days of Hippocrates (himself a very prince of observers, as the truthfulness of his descriptions of diseased conditions still attest) to those of our own time. A single grain of correct observation is worth a whole bushel of hasty generalisation any day. The former stands crystallised for all time, whereas the latter is constantly undergoing revisal or passing into the limbo of forgetfulness and contempt; therefore, minds of the cast of John Hunter's and Darwin's were never in a hurry to generalise, but, with infinite labour and pains, careful to observe and verify over and over again.

The merest glance at the history of medicine points most conclusively to the truthfulness of this doctrine, that whenever the profession ceased to be observers of and inquirers into—"servants of nature," in the most comprehensive sense of the term, and were simply blind empiricists with drugs—then, indeed, were the dark ages of medicine.

Though Hippocrates, as the author of the aphorism we have chosen for our motto, was fully alive to the value of the truth it contained, there was little of his spirit present in the minds of the profession till long after the middle ages, though there was abundance of pedantic learning; hence the great body of medicine for hundreds of years was little better than a record of exploded tradition, magic, and superstition.

It was not until the latter half of the eighteenth century that Morgagni, the great Italian, by his pathological labours and researches, conducted in the spirit of the Greek aphorism, was the means of dispersing that baleful cloud of magic and superstition which dominated the practice of medicine for centuries, and of inaugurating the dawn of a newer and more rational medicine, because founded on the knowledge of the natural history of disease as read in diseased structure. Into the labours of Morgagni, John Hunter and all who were animated by his spirit entered and became his heirs and successors, Hunter's great personality, with its far-reaching qualities, its freedom from existing prejudices, and its splendid originality, as his epoch-making investigations upon the subjects of inflammation, healing, and organisation, among others, triumphantly showed, overtopping all the rest. Out of their achievements, again, were developed, later still, in the first half of the nineteenth century, other waves of the same spirit, notably those in which figure the honoured names of Graves, Stokes, Bennet, Allison, Forbes, and our own Gairdner, which showed themselves, generally, in a disposition to serve Nature—study the natural history of disease, when the discoveries were made that acute inflammations and fevers got much sooner well without our meddlesome interference than with it; and, as a consequence, blood-letting and other debilitating measures, together with excessive stimulation, were gradually discarded for the more expectant and saner treatment of systematic and rational feeding. Nor in all this, as we saw when quoting from the pages of *Horæ Subsecivæ,* was the "homœopathic delusion" without contributing an undoubted share in mitigating the activity of medication by teaching—suggesting to those who had the gift to take a hint—the natural course of disease towards a cure.

It is, however, chiefly during the latter half of the present century that, commensurate with the microscope and its improvements, Nature has been served and waited upon at her altars, by bands of industrious and gifted ministers in all countries, with a devotion and enthusiasm the world has never known before; and with the result of placing at the disposal of the medical profession a wealth of knowledge and fact that is like to entirely revolutionise our views and treatment of disease, if, indeed, it has not already done so.

By the gradual elucidation of "the structure of the cell, its life, history, and functions, and its method of growth, of division and reproduction," the way was paved for bringing to the front the question of the origin and development of bacteria. The bacteria controversy was the result and grew out of the cell controversy, so to speak, fostered and hastened perhaps by the resuscitation of the now defunct theory of spontaneous generation.

As it has been demonstrated beyond all doubt that every cell is derived from a preceding cell of similar structure and properties, so it has been proved by Pasteur, Koch, Cohn, Roberts, Tyndall, our own Lister, and others, that all bacterial organisms, and all yeasts, moulds, and fungi, are derived from similar pre-existing active vital organisms. At the same time, just as a long series of generations of cells, placed under abnormal conditions, have been shown gradually so far to depart from their original type that they may appear to have lost their chief or primitive characteristics, so bacteria, when placed under altered and abnormal conditions, though not actually changing their specific character, appear, during the course of severe epidemics of disease, to undergo modifications when cultivated outside of the body.

Bacteriologists, working in the spirit of our motto, were continually making contributions to this hitherto enigmatical subject—that silkworm disease, for instance, was a miasmatic contagious disease caused by the presence of extremely minute spores on and in the bodies of silkworms—that as yeasts gave rise to fermentation, so vibriones must be the cause of putrefaction—that cotton wool sterilised by heat was a filter against the entrance of germs into a flask containing a putrescible organic fluid—that a new fermenting organism (described by Pasteur) had the power of forming lactic acid from sugar—that urine and blood and the juice of grapes might be kept free from decomposition and from the presence of organisms if the apparatus into which they were received could be first thoroughly sterilised by heat, and if the substances were not allowed to come in contact with the outside air—that in the blood of a patient suffering from anthrax had been discovered the anthrax bacillus—that unless micro-organisms were introduced from without by some means or other into organic fluids, no putrefaction could take place—that is, until some organisms were present which could grow and multiply in the fluid, no evidence of organic life would make its appearance.

And this last discovery of Pasteur brings us down to the time of some of ourselves, 1865-67, when Lister was making his first experiments on the antiseptic treatment of wounds, and insisting upon the importance of excluding special bacterial organisms from the same. It was by virtue of Lister being imbued, in an eminent degree, by the spirit of the Hippocratic aphorism, by being a student, an interpreter, a servant of Nature, that he became the true heir to Pasteur's labours, and so was the means of inaugurating a new departure in surgical practice, the effects of which were to be more far-reaching than could have entered into our wildest dreams to conceive. It must always be a feather in the cap of medical Glasgow that the foundation of this newer surgery, so full of beneficient possibilities for the future, was initiated and laid in our own Royal Infirmary; and if the proverb, that a prophet hath no honour in his own country, received some slight fulfilment in the early stage of antiseptics, the Glasgow school can boast of some apostles, trained under the great master himself and his immediate successors, whose surgery, for perfect and scrupulous antisepticism, is unrivalled throughout the world.

Some of us are old enough to remember these Royal Infirmary days, when we followed Professor Lister through his wards, and, with keen interest, watched him making some of his very first experiments in antiseptic surgery. The enthusiasm shining in his refined face, with its not unpleasant lip-mannerism; his gentleness, patience, exceeding care in manipulations, lucid expositions of his doctrines, and radiant prophecies of the great revolution in the saving of human lives he saw brightly looming in the future, must be present to the minds of those of you who were privileged to see him opening some of his first lumbar or psoas abscesses under cover of his carbolic curtain, then quickly applying over incision, as curtain was withdrawn, a piece of putty made of whiting, olive oil, and carbolic acid. On those occasions he used to hand round the pus in a vessel that we might assure ourselves it was free from odour, telling us, at the same time, that the abscess cavity would remain so if the germs in the air were only excluded. Then, too, his quiet jubilation the next time he dressed the abscess, and demonstrated to us that there was nothing but a little straw-coloured serum, and not the faintest odour of putrescence.

The Royal Infirmary directors, as you all know, are going to take down the old front block of buildings, whose architectural features are so familiar to Glasgow people, and erect, in honour of the Queen's jubilee, a new one in its stead; and I would here venture to make a suggestion, which is this, that they commemorate the name and fame of Lord Lister, who, by his genius, as one of Nature's chiefest servants, has made the Glasgow Royal Infirmary (I was going to say a household, but will say) an hospital word wherever throughout the world surgery is practised, by putting his bust in a niche of the new wall, or his whole noble figure, for that matter, on a pedestal in front of the new block, surely an infinitely worthier presentment to stand before the Infirmary than some of the monuments of nobodies lately erected in its vicinity.

A good deal has happened, even in the theory and practice of antiseptics, since Lister was employed in the Royal Infirmary converting compound fractures into simple ones, and dressing lumbar and psoas abscesses with carbolic putty; and that, as you know, chiefly at the hands of those great high-priests of Nature—Pasteur, Koch, and a host of others who, in the interval, were silently prosecuting their researches into the mysterious life and ways of bacteria. One of the most important results of these labours was the establishment of the doctrine of phagocytosis, based on the observations of Metchnikoff, which reads more like the pages of romance than sober science. The distinguished Russian's descriptions of how the animal cells and these myriads of microbes wage war upon each other is as fascinating as a record of the habits and customs of some newly-discovered African tribe by Stanley. The cells march out to engage the attacking microbes, and, it may be, annihilate them by devouring them; or the microbes get the upper hand of the cells by intoxicating and paralysing them with the toxins shed from their comma or rod-like bodies, according to the numbers and vitality of the attacking and opposing forces and the general fortune of war. If the day goes against the microbes, the victorious cells, instead of making provision like civilised warriors for the burial of their dead enemies and the treatment of the wounded, gobble them up like cannibals, thereby clearing the field of the dead and putting recovery and possible future harm out of the power of the wounded.

The further discovery of another substance, an antitoxine, elaborated in the blood during the course of all this warfare, able to antagonise the toxine, and so confer immunisation on the animal whose cells had fought this good fight and come off victorious—I say, this further discovery, together with the identification of certain specific infective diseases with certain individual organisms, prepared the way, as you all know, to that marvellous chapter of serum therapeutics, the first pages of which are only as yet written.

Now, all these achievements in the story of medical progress, which we have been briefly sketching, bring very forcibly home to our minds the indebtedness of medicine to the advances of the collateral sciences—the dependence of therapeutics upon the labours of such great servants of Nature as Pasteur, a chemist, who, while engaged in researches intended primarily to aid the great wine and silk-growing industries of France, opened up to us by his dicoveries a new era in medicine, and brought us within measurable distance of the solution of the great problem of the prevention and cure of infectious disease.

Nor, if we read the signs of the times aright, is medicine in the future likely to be under a less weight of obligation to the contributions of her devoted sons of Nature; and the best guarantee for the realisation of that prediction is to be found, I think, in the greatly improved state of medical education, compared with what it was thirty or more years ago when some of the elders among us here were students; for it, too, sharing the impetus of the great wave of progress, has been unable to stand still, and forced to move with the times.

I consider the addition of physics, for instance, to the already overcrowded curriculum of the student as a very great advance on the old system that only asked a smattering of mechanics in the preliminary, because a sound knowlege of physics is not only an excellent preparation of the mind for becoming an observer of Nature, but is imperative if the student is to grasp with intelligence, and, therefore, with profit, the great principles of physiology and the other subsequent branches of his studies.

Botany and zoology, again, which have always held the field in a university medical education, have been frequently decried as useless studies to the overworked student. But for us to do so, in the light of our chosen motto, "Ὑπηρέται Φύσεως," and the lessons we have been deducing from it to ourselves, would be the most flagrant inconsistency. It would be to forget what a splendid discipline the pursuit of these studies, as we saw in the case of the John Hunter of our seal, are to the faculty of observation—to the training of the eyes of the students to see things as they are for themselves, which training, I am satisfied, will stand them in good stead when they come to study the natural history of disease at the bedside, and the bare facts of botany and zoology are perhaps forgotten. Allow me, in support of this contention, to quote the much weightier words than mine of Professor Gairdner, from an introductory address delivered to the medical students of Glasgow University, session 1866-67. "It is," says Dr. Gairdner, "for this reason also that we urge upon you, as a study of the first importance to your future welfare and progress, the fascinating pursuit of natural history, whether in the realm of geology, or botany, or zoology. That study, when rightly pursued, is, I hesitate not to say, at once the most agreeable and the most effective discipline for the work of the dissecting-room, the laboratory, or the hospital. It trains at once the mind and the senses; and through the most wholesome and delightful observations of detail it leads up to the most profound generalisations and the most far-reaching theories. In even so simple a set of objects as those which lie between the petals of a daisy there are whole depths of thought a thousand times more practical and more useful to you as medical men than all the speculations and assertions of all the pseudo-philosophers who wrote for or against antimony, from Basil Valentine in the thirteenth century to Gui Patin and Guénaut in the seventeenth. For in the one case you are feeding your mind with substantial truth, and realising it step by step as you go along; in the other you are feeding on the wind of doctrine, and the result is simply nothing or worse than nothing—wasted time, disappointed effort, a painful sense of utter vacancy—'Vanity of vanities,' saith the preacher, 'all is vanity!'"

And, moreover, if this is true as regards the theoretical study, it is especially so of the practical classes in these natural history subjects, including, of course, practical physiology, all innovations since the beginning of the seventies. Its truth, too, applies with even more force to that most important branch of study, practical pathology, a subject the very theory of which was hardly taught at all thirty years ago.

Surely, then, the students who have gone honestly through all this valuable practical training with the microscope in the different laboratories ought to be in a position, not only to make better use of their eyes when they reach the bedside stage of their teaching, but also to make a more distinguished and original use of their opportunities when they enter upon practice at large. Besides, the value of such practical study, while it will be enhanced in the case of those already possessed of some of the Hunterian genius, it will be of the greatest benefit to others less fortunately endowed, for it will, by teaching, example, and discipline, create in them a habit of mind that will tend to look upon their chosen life-work in the spirit of the Greek aphorism we have adopted as our motto, and without which practical training and discipline they might have practised their profession througout life with their eyes and minds shut.

And so this rapid survey of the practical aspect of present-day medical teaching brings us back to our original starting-point—the investiture of the Glasgow Eastern Medical Society with a seal and motto, the gift of Mrs. Mather, the widow of the Society's first president.

It is, therefore, reasonable to believe that the Society, numbering as it does so many young men in its membership with this newer equipment we have been praising—so many ardent young servants of nature, will never let the motto we have chosen for our seal become a dead letter, but rather will jealously take care that it is ever a living instrument of stimulation to progress. And the best way to secure such a desirable consummation is for every member, old and young, especially the young, to become contributors to the Society's meetings, not only with their assistance in discussions, the reading of papers, and the presentation of notes and cases, but also by the regularity of their personal attendance. Members must make it their duty to come whenever possible, and not just when they are in the humour, or when they consider there is something good on, or a subject in which they are interested. No medical society can thrive and do good work if the interest is only confined to a few, or if the chief papers read to us are from outsiders—men who only attend our meetings when they themselves are the performers. In the latter case we are not a society in the genuine sense at all, but an institution of a course of lectures. Not that I deprecate altogether the reading of papers by outsiders. On the contrary, I esteem it very highly, and am even ready to acknowledge that by far the most original and valuable contributions to the Society have come from outsiders. But what I contend for is that that is not the chief thing, certainly not the most educative course for us. If our Society is to be a healthy society, and answer the purpose for which it was instituted—to be a source of helpfulness to us in our work by the mutual interchange of experience and ideas—every member must loyally and willingly discharge his share of the work. After all, it is always the workers, those who have prepared themselves for taking an intelligent part in discussion, or, better still, who have written a paper, or shown an interesting case, rather than the mere listeners, who receive the greatest benefit. Moreover, the keener our interest in the Society's welfare, the more alive we are to the fact that we must contribute our share, the more student-like will we go about our everyday practice. However high our ideals may be when we start on the work of our professional life, the most sanguine among us are apt to fall short in living up to them, realising them as we proceed in our career, so many, and even plausible, are the excuses to make us do so. But if we all knew, as members of a society, that something was expected of us, we would observe more closely, take notes, read up, and carefully accumulate experience, so that we might be in a position to give it back again when the occasion arose. True, we cannot all be John Hunters. There is only one John Hunter, as there is only one William Shakespeare, but it is open to us all, the humblest among us, to work in his spirit, to be, in however infinitesimal a degree, "*Ὑπηρέτης Φύσεως.*" It may not always be the best paying course, at least in hard cash, but, like virtue, it will bring its own reward, not only in enhancing the interest and pleasure of our work, but in enabling us, perhaps, to lay a stone, however small, on that great structure of medical progress and achievement which we have been briefly glancing at to-night, and trying, very ineficiently, I am painfully aware, to show the very important hand those who were in the truest sense servants of nature had in the rearing of it.

A YEAR'S WORK AT THE GLASGOW MATERNITY HOSPITAL, WITH NOTES OF CASES.[1]

By MALCOLM BLACK, M.D.,

President, Glasgow Obstetrical and Gynæcological Society;
Physician, Glasgow Maternity Hospital.

I HAVE thought that I could not do better, by way of contribution to your proceedings, than give a summary of last year's work of the Glasgow Maternity Hospital, with notes of some of my own cases there during that time. The Hospital year begins on the 15th of November; I have therefore to deal with its work from the 15th of November, 1895, to the 14th of November, 1896. I was on duty as assistant to Professor Murdoch Cameron, the retiring physician, during the latter half of November, 1895, and as physician in December, 1895, and March, April, August, September, and October, 1896. The rest of the year the Hospital was under the care of my senior colleague, Dr. Oliphant. Dr. Stark acted as assistant to Dr. Oliphant, and Dr. Jardine assisted me. Professor Murdoch Cameron, as one of our consultants, also performed operations in the Hospital during the year. I will first give you the general statistics of the Hospital for the year, and then summarise the results of the work of the in-door department. Thereafter I will read notes of some of the more important cases which fell under my own care, as far as time will permit.

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[1] A paper read at a meeting of the Glasgow Obstetrical and Gynæcological Society, held on 26th May, 1897.

The following are the official statistics of the Hospital for the year from 15th November, 1895, to 14th November, 1896:—

In all there have been 2,620 cases attended in connection with the Hospital during the year.

IN-DOOR CASES.

Number of women admitted to Hospital—	
Confined at full time, ...	394
Confined prematurely, ...	73
Miscarried, ...	9
Other cases admitted, not confined in Hospital,	6
	482

	Boys.	Girls.	Total.
Children born alive in Hospital at full time, ...	184	178	362
Children still-born at full time, .	24	12	36
„ premature—alive, . .	19	21	40
„ „ dead, . .	22	14	36
	249	225	474

There were 7 cases of twins.

Operative cases in Hospital—

Forceps,	89
Version,	18
Craniotomy,	16
Induction of labour,	26
Cæsarean section,	2
Abdominal section for ruptured uterus (delivered before admission),	1
Evisceration,	1
	153

Maternal deaths in Hospital, 13.

OUT-DOOR REPORT.

Number of women attended at their own homes who were confined at full time,	1,643
Who were confined prematurely,	33
Who miscarried,	21
	1,697

	Boys.	Girls.	Total.
Children born at full time—alive,	767	717	1,484
,, ,, dead,	8	3	11
,, prematurely—alive,	6	5	11
,, ,, dead,	12	10	22
	793	735	1,528

There were 16 cases of twins.

Operative cases—

Forceps,	98
Version,	12
Craniotomy,	1
	111

Maternal deaths, 1.

REPORT OF WEST-END BRANCH, ST. VINCENT STREET.

Number of women attended at their own homes who were confined at full time,	411
Who were confined prematurely,	14
Who miscarried,	16
	441

	Boys.	Girls.	Total.
Children born at full time—alive,	232	181	413
,, ,, dead,	5	2	7
,, prematurely—alive,	3	5	8
,, ,, dead,	5	2	7
	245	190	435

There were 10 cases of twins.

The operative cases were—

Forceps, ...	10
Version, ...	2
	12

There were 2 maternal deaths. One died of pneumonia, from which she was suffering at the time of confinement; the other died of hæmorrhage from placenta prævia.

I will now summarise the results of the in-door department of the Hospital.

Six cases that were admitted to the Hospital during the year are mentioned as not having been delivered there. Two of these died undelivered, both cases of pernicious anæmia, and four were dismissed. Two of these latter patients had severe ante-partum vomiting, one of whom, after spending a night in the Hospital, was transferred to Barnhill Poorhouse; and the other, who was near full time, after spending a week in the Hospital, got well and insisted upon going home. Another was a patient between seven and eight months pregnant, who came in bleeding profusely from a small wound near the orifice of the urethra, from accidental injury. The hæmorrhage was controlled and she was dismissed well, labour not having come on, and by and by she was safely delivered at home. The last case was that of a patient who came in, not in labour, but with severe abdominal suffering. She was transferred next day to the Western Infirmary, where shortly after she underwent abdominal section, and had an ovarian tumour removed. She had been pregnant at the time, but went on to term, and was then delivered all right at home.

Thirteen women died in the hospital. Two of these died soon after admission from pernicious anæmia, undelivered, as already mentioned. In both cases the child appeared to be dead on admission, and any attempt at delivery would evidently have only hastened the fatal result to the mother. One case of eclampsia died, and another patient had suppression of urine and died from uræmia without any marked eclamptic fits occurring. A case of placenta prævia was fatal from syncope on the third day after delivery. A patient who was sent in exhausted by long continued vomiting had abortion induced, but too late to save her. Two patients were brought into the hospital with ruptured uteri. One had the rupture sutured, while in the other case it was decided not to operate, and both died. One patient died after Cæsarean section, and four after craniotomy. Four other maternal deaths, however, must also be credited to the hospital, patients who died in Belvidere Fever Hospital, where they had been transferred, having developed septicæmia, and of whom I will speak further on.

All the rest of the mothers were dismissed well, with the following exceptions. Three patients became insane and were removed to asylums, one of these suffering from chorea. Four patients developed mammary abscesses, three of whom were transferred to the Royal Infirmary, and one who refused to go to the Royal was allowed to go home. A patient who was sent to us from the Western Infirmary suffering from peritonitis and threatened with premature labour was confined in the Maternity, and afterwards sent back to the Western much improved. She left the Western nearly well. One patient was sent to the Royal Infirmary with renal disease, her puerperium otherwise having been normal. Three patients were allowed to go home still showing albuminuria. One patient was transferred to the Royal with pelvic cellulitis; she left there quite well. Her temperature had been subnormal for some days before she left us. Another patient was sent to the Royal suffering from cystitis, and she also left the infirmary well. One patient, a case of induction for justo-minor pelvis, was transferred to Town's Hospital suffering from incontinence of urine; the incontinence disappeared there, and she left quite well. One patient went home suffering from phthisis pulmonalis. Another patient went home suffering from secondary syphilis; her puerperium had been normal. One patient went home with acute tubercular disease of the hip-joint, refusing to go to the Royal. Another also refused to go to the Royal, and went home suffering from kidney mischief, with pus and tube-casts in the urine. Three other patients who had not quite recovered insisted upon going home. Lastly, nine cases were transferred during the year to Belvidere Fever Hospital, having developed septicæmia, four, as I have already mentioned, proving fatal. Two were sent in January, the first on the 4th and the second on the 12th. The first was an easy forceps delivery. The morning she went to

Belvidere her temperature had fallen to normal, and the previous day it was 99·4°. She was ultimately dismissed from Belvidere well. The second was a very difficult forceps delivery in a woman who was suffering at the time from pleurisy and bronchitis. She died in Belvidere soon after admission. The third patient was sent in June. She was a case of unassisted delivery in a primipara, with moderate perinæal tear; she died. The fourth was sent in September, a case of contracted pelvis; delivery effected by version of a live male child; she recovered. The remaining five cases were transferred to Belvidere in November, one on the 5th, three on the 7th, and one on the 10th. The occurrence of this group of septic cases determined us to stop receiving patients into the hospital, if possible, and purify the house. All the other patients then in the hospital were ultimately dismissed well, and the hospital completely emptied of patients and thoroughly cleaned and disinfected before patients were again admitted. Two of the five sent to Belvidere at this time died there (one of whom had been delivered of a very foul-smelling fœtid fœtus), and the others were ultimately dismissed well. The last one sent was probably not a case of septicæmia.

I will now read notes of some of my own cases and I will first take the fatal ones. Of the patients admitted under my care during the year six died, and the following are notes of their cases:—

CASE I. *Ruptured Uterus.*—Mrs. G., admitted to Glasgow Maternity Hospital on 1st March, 1896, with ruptured uterus. Decided not to operate. Died. This case has been already reported to you in full.[1]

CASE II. *Severe Vomiting of Pregnancy.*—Mrs. H., admitted 5th March, 1896. She was supposed to be at the fifth or sixth month of her eighth pregnancy, and her life was evidently seriously endangered from long-continued and incontrollable vomiting. For the previous fortnight she had been sustained by rectal feeding only. She had had all manner of drugs her medical attendant could think of, and latterly had the os dilated to an extent sufficient to admit a finger, and cocaine applied to the cervix, all without avail. On admission, Dr. Black considered immediate induction of abortion indicated, but at the request of Dr. Sloan, consulting physician to the hospital, the proceeding was deferred.

Next day (6th March) Drs. Black and Jardine decided to induce abortion, as patient was much worse, and emptying the uterus seemed to afford her the only chance of surviving, and that a very small one. Accordingly, at 3 P.M., a bougie was introduced, the membranes rupturing, and at 7 P.M. delivery was completed. The fœtus was a male, weighing 1 lb., and measuring 13 inches in length. Its heart was beating well at birth, and it gasped several times, but soon died. Patient's pulse was almost imperceptible after delivery, and she had several hypodermics of ether and a sinapism over the heart.

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[1] *Vide Glasgow Medical Journal*, September, 1896, p. 219.

Patient died at 7 P.M. on the 7th. From the passage of the bougie and rupture of the membranes, *the vomiting ceased*, and patient thereafter was able to take and retain brandy and milk by the mouth as well as by the rectum, but her pulse remained imperceptible and her limbs cold, although she expressed herself as feeling comfortable. No *post-mortem* was allowed. Her husband stated that she had been troubled from girlhood "with her stomach," the vomiting being, however, always aggravated by pregnancy.

CASE III. *Uræmia—Suppression of Urine.*—J. Y., aged 19, primipara, admitted 13th March, at noon, and delivered at 3·10 P.M. Duration of labour, first and second stages, twelve hours; third stage, fifteen minutes. Child (female), mature, born alive; weight, 8 lb.; length, 19½ inches.

On admission, the os was well but not fully dilated, membranes unruptured, head presenting R.O.P. From 1 to 2·30 P.M. the head seemed to make no progress, although the os became fully dilated. At 2·30 P.M. the membranes were still intact, but shortly after they ruptured, and the head rapidly rotated to the R.O.A. position, and delivery was effected without mishap.

23rd March.—This case terminated fatally this morning at 7·30 A.M.

On admission, the catheter was passed, but no urine was obtained. After delivery the urine was passed in good quantity, but being contaminated by the lochia, it was not examined. It was observed that patient had a grey earthy appearance, and that although complaining of nothing she looked decidedly ill. Examination of heart, lungs, abdomen, and pelvic organs giving negative results, the urine was drawn off by catheter on the evening of the 19th March. About half an ounce of urine was obtained, which showed a deposit of over one-third albumen on boiling. The sediment contained great numbers of granular tube-casts. From that time onwards patient had complete suppression of urine, voiding only about 2 drs. on 22nd March. Previous to catheterisation the urine had been in good quantity. On 20th March she was put in hot dry pack, and given 2 drs. liq. ammon. acet. hourly. The skin, which had previously been harsh and dry, acted well. The bowels were freely moved with Epsom salts. On the morning of 21st March, percussion seeming to indicate the presence of a few ounces of urine in the bladder, a catheter was again passed, with no result. During the forenoon of the 21st, the skin did not act so well, and there was vomiting and retching. Four dry cups were applied over the kidney region, and a hot wet pack was administered at 1·30 P.M., with little result. One-tenth gr. of pilocarpine nit. was injected hypodermically at 3 P.M., followed quickly by free diaphoresis and considerable amelioration of the symptoms. At 7 P.M. patient was seen by Dr. Alexander Robertson in consultation, who advised 10 drops of tinct. digitalis and 10 grs. pot. acet. four-hourly; other treatment as before. Patient's condition did not improve through the night; there was retching and hiccough, and some vomiting.

22nd March.—The mixture of digitalis and acet. potas. not being well retained by the stomach, rectal injection of hot water with the digitalis mixture was tried once, but rejected. The pulse tension was now high. In spite of continuous hot dry pack the skin no longer acted well. At 3 P.M. one-tenth of a grain of pilocarpine nit. was again injected, and diaphoresis followed, but did not last long, and was not copious. Dry cupping was repeated at 7 P.M. Breathing was now more rapid (50), and inspiration harsh over the bases, pulse softer. From 8·30 onwards, hot wet pack one or two hours was alternated with the hot dry pack for two hours. Patient gradually got weaker. Retching and vomiting were less, but hiccough was troublesome, and the breath had a urinous odour. Five drops of amyl nitrite was administered at 9·40 P.M., without result. The last hot wet pack was administered at 12·30 A.M. on 23rd. The breathing gradually became more rapid (50 to 60), the pulse weaker and more rapid (150 to 160). Just before death, at 7·30 A.M., on 23rd March, there was a slight convulsive seizure. No urine passed except 2 drs. on night of 22nd. This 2 drs. of urine had much epithelial *débris.* No *post-mortem* obtained.

CASE IV. *Complete Placenta Prævia—Fatal Syncope on third day of Puerperium.*—Mrs. M'K., aged 38, admitted 30th March, 1896, at 2 A.M. This is her eleventh pregnancy. She is a very poorly nourished woman, and is said to be an inebriate. Says she menstruated last in August, towards the end of the month. Pregnancy was normal till the beginning of this month, when bleeding occurred on one day (4th March), but did not recur till the 29th. At 7 P.M. on 29th March bleeding began again, and patient states that it was unaccompanied by pains. Two nurses from the Hospital arrived at patient's house at 9·15 P.M. They found the hæmorrhage had ceased, but patient had already lost a great deal of blood. There were several large clots on the bed, and the body clothing of the patient was saturated. Patient stated that she had vomited several times, and that the bleeding was worse when she vomited or coughed. Hæmorrhage did not recur after the nurses' arrival, nor were there any pains. They at once raised the foot of the bed and sent to the Hospital for Dr. M'Laren, the out-door house surgeon, who being out, Dr. Edgar was summoned, and arrived at 11 P.M. Dr. Edgar found a complete placenta prævia present, and that the os admitted a finger easily. He separated the placenta with his finger for some distance round the os, and, having cleared several clots out of the vagina, he plugged it firmly with antisepticised cotton-wool tampons. Dr. M'Laren, on his return, decided to have patient brought into hospital, and accordingly she was brought in by ambulance at 2 A.M. Her general condition was then fair, no great pallor, no symptoms of continued concealed hæmorrhage. A few additional tampons were inserted, and patient was not further interfered with meanwhile. Her pulse was 110, soft but moderately full, and its condition next morning was rather better. Fœtal heart sounds heard. At 11·30 A.M. the tampons were removed by Dr. Black, and it was found that during the night there had been practically no bleeding. The os admitted three fingers, and was soft and dilatable. The placenta was presenting and partially separated from the lower uterine segment. Dr. Black dilated the cervix further with his fingers, and in a few minutes was able to introduce his hand into the uterus. He first separated the placenta for some inches from the anterior wall; but not reaching the membranes in that direction, he passed his hand upwards along the posterior wall separating the placenta. He reached the membranes about 4 inches from the os, ruptured them, and found the head presenting, but a foot within easy reach. The latter he readily brought down, and the head went up without manipulation, the liquor amnii being abundant. With slight traction and suprapubic pressure the trunk was expelled. The arms were extended beside the head, but were readily brought down. The os was scarcely fully dilated, and a little resistance was experienced in bringing the head through it. Breathing was not readily established in the child; but Schultze's method of artificial respiration, followed by alternate hot and cold baths, brought it round. The child measured 18½ inches in length, and weighed 5½ lb. After the expulsion of the child the uterus was grasped, and in a few minutes there was a gush of blood-stained liquor amnii. The mother's pulse was hardly perceptible, and accordingly a hypodermic injection of ether (30 minims) was given, and it became stronger. After twenty minutes had elapsed without the placenta being expelled, Dr. Irvine (house surgeon) introduced his hand into the vagina and found the placenta almost completely expelled from the uterus, but not wholly so. The hand was then passed into the uterus, the placenta removed, and the membranes, which were somewhat adherent, separated and removed. The uterus was then douched with corrosive sublimate solution (1 in 3000) at a temperature of 120°, and ergotin (3 grs.) injected hypodermically. The uterus thereafter contracted well.

31st March.—Patient passed a restless night, complaining of thirst and headache. There was a good deal of sickness. The pulse, however, is somewhat improved this morning, but very rapid (160) and poor at the best. Temperature 102·8°.

1st April.—The general condition of patient steadily improved throughout yesterday. Vomiting occasionally occurred, but was checked on the substitution of egg-water for milk. Patient drank well throughout the day, and in the evening and through the night tolerated milk. This morning, however, her pulse is not so good as last night. The heart sounds are faint, and there is a suspicion of a hæmic systolic murmur at the mitral area.

2nd April.—Patient again rallied somewhat yesterday. During the evening her general appearance was encouraging, and her pulse rather less frequent (144). This morning at 10 o'clock she had a fatal syncope quite suddenly. She died before any restoratives could be used. *Post-mortem* not obtained. Baby sent to poorhouse.

CASE V. *Craniotomy.*—Mrs. M'I., aged 21, primipara, admitted 7th August, 1896. Dr. Brown, out-door resident, brought her into Hospital after having failed to effect delivery with forceps at her home. On admission she was put under chloroform, and forceps again applied by Dr. Hay, in-door resident; but after considerable traction there was no advance of the head. On Dr. Black being then summoned, he found the cord prolapsed and pulseless. Accordingly perforation was performed, the brain substance broken up and evacuated, and extraction effected by the cranioclast. Some difficulty was experienced in extracting, and after delivery the mother was greatly exhausted. She gradually lost strength, and died on 11th August. No *post-mortem* obtained.

CASE VI. *Craniotomy.*—Mrs. K., aged 24, primipara, was admitted on 7th September, 1896, at 2·15 P.M. Labour had begun on the 6th about 2 A.M., and the membranes ruptured between 3 and 4 P.M. On the forenoon of the 7th she was put under chloroform, presumably to apply forceps. She was then sent to the Maternity Hospital as a case of contracted pelvis. On admission, head was presenting, occiput to the left, a large caput succedanum formed. The diagonal conjugate measured 3¼ inches. Active contractions set in soon after admission. The fœtal heart sounds could not be heard. Dr. Black saw her about an hour after admission, when, the child evidently being dead, he proceeded to perform craniotomy. Having perforated, he broke up the brain matter with crochet and douched it well out. He then applied the cranioclast, but failed to move the head with it, the instrument slipping repeatedly, breaking off portions of the vault, which he removed with the craniotomy forceps. He then crushed the head with the cephalotribe, and reapplied the cranioclast, which slipped as before. Then, finding that he could not get a permanent grip with the cranioclast, and making sure that the brain matter was thoroughly washed out, all projecting spiculæ of bone removed, and the scalp well covering in the broken edges of the cranial bones, he turned, and extracted with the help of the crochet. There was some post-partum hæmorrhage, the uterus not contracting well. The placenta was removed manually, and the uterus thereafter well douched; 3 grs. of ergotin given hypodermically. After delivery, her temperature rose to 101·4°, with pulse 160. During the evening she slept a good deal. There was a free sanguineous discharge from the vagina, but not any very active bleeding; 1½ drs. ergot was administered, and 1 dr. whisky was given hourly.

10th September.—Since delivery she has become steadily weaker. The temperature has not been very high (maximum 101·8°), but the pulse has become more rapid, and it is extremely soft. The lochia has been normal till last night, when it presented a suspicion of fœtor, and an intra-uterine douche was therefore given. She has been in a state of partial stupor all night, being difficult to rouse, and has lost control of bladder and bowels. She still takes and retains nourishment and stimulant, although now and then she seems inclined to vomit. This morning a hypodermic of strychnine was given, and she is having 4 oz. of brandy in twenty-four hours. Tenderness of the abdomen was very pronounced the day after delivery (the 8th), but is not now present to any extent. The fundus uteri has all along been difficult to define. Died at 8 P.M. Temperature before death rose to 104°. No *post-mortem* examination obtained.

I will now read notes of my cases that were sent to Belvidere, having developed septicæmia. These were five in number, all of whom ultimately recovered.

CASE VII. *Sepsis.*—B. K., aged 23, primipara, admitted 26th December, 1895, at 4·30 P.M., and delivered same date at 8·5 P.M. Child born alive (male), mature; weight, 8¾ lb.; length, 20 inches. Duration of labour, first and second stages, seven hours; third stage, ten minutes. Head presenting. Forceps applied at outlet by resident.

2nd January.—For several days this patient has not been well, with a temperature ranging from 100° to 103°, a rapid pulse, and general symptoms of feverishness. The abdomen is slightly swollen, though not tense, and while generally tender to the touch, is particularly so in the lower right side. An intra-uterine douche was given to-day, with subsequent great amelioration of the symptoms.

4th January.—Although patient's temperature has been falling, she has a rapid pulse, slightly distended and tender abdomen, and other symptoms pointing to sepsis. She was removed to-day to Belvidere.

1st April.—Dismissed from Belvidere well.

CASE VIII. *Contracted Pelvis—Version—Septicæmia—Recovery.*—Mrs. G., aged 29, primipara, admitted 1st September, 1896, at 8·15 P.M., and delivered on the 2nd at 2·5 P.M. Duration of labour, first and second stages, seventy-four hours; third stage, five minutes. Child born alive (male), premature; length, 19 inches; weight, 5½ lb.

This patient was sent into Maternity Hospital by a medical man on account of contracted pelvis, and was in labour on admission. The diagonal conjugate was found to measure 4 inches. The head presented, with its occipito-frontal diameter lying transversely or nearly so, occiput to the right. After admission, the house surgeon thought it right that patient, who was having fairly strong pains, should be left alone for a time to allow the fœtal head to mould, as patient did not seem in any way exhausted. The head became engaged in the brim to a slight extent, but did not succeed in descending. The morning after admission Dr. Black saw the patient, and decided to perform version. This he did, and extracted a living child, after some difficulty in bringing the head through the brim. A considerable post-partum hæmorrhage followed, and accordingly the placenta was removed by the hand, and a hot antiseptic intra-uterine douche given, when the uterus contracted fairly. The perineum sustained an incomplete rupture, and four stitches were inserted. The child required artificial respiration and alternate hot and cold baths before breathing was completely established. There was considerable moulding of the head, with a marked depression in the left parietal region, and since birth the child has had several convulsive seizures, affecting chiefly the right side of the face and body, and a persistent tonic spasm of the muscles of the right side of the face. To-day, however (3rd September), the fits have ceased, facial distortion is passing off, and the head is rapidly recovering its normal shape. After delivery, patient had a rigor with elevation of temperature to 103·4°, but the temperature is now much lower, and she feels well, having passed a quiet night.

6th September.—On the evening of the 3rd the temperature again rose to 103·4°, and since then it has remained febrile, on several occasions reaching over 104°, and she has had several rigors. The lochia has been fœtid since yesterday morning. The uterus has been douched daily since the 4th, and yesterday it was scraped with a blunt flushing curette. To-day's douching was followed by smart hæmorrhage. She is now having 5 grs. of quinine every four hours. A glycerine and iodoform emulsion (1 in 10) is injected into the uterus after douching.

8th September.—Patient remains in same condition as at last note. This morning (6 A.M.) temperature was 104°. During yesterday and the previous night she had diarrhœa, and there is an icteric tint of the conjunctivæ to-day and yesterday not previously noticed. Yesterday Drs. Black and Oliphant in consultation decided that she ought to be removed, and to-day patient went to Belvidere Hospital.

The child was taken home, and is at present in a satisfactory state. The head has regained its normal shape, and there are no convulsions or other unfavourable symptoms.

17th October.—Information received from Belvidere to-day to the effect that patient remains weak and debilitated, with an evening rise of temperature, and for the past two days the right leg has been swollen and œdematous.

Patient was dismissed from Belvidere, recovered, on 25th November.

Case IX.—E. R., aged 21, primipara, admitted 28th October, 1896, at 4 A.M., and delivered same date at 7·30 P.M. Duration of labour, first and second stages, twenty and a half hours; third stage, ten minutes. Child born dead; presenting breech; female; mature; its weight, 7½ lb.; and length, 20 in.

Patient was admitted with os the size of a florin and the breech presenting. Labour proceeded till about 6 P.M. without complication, when patient took an epileptiform seizure. The convulsion lasted a few minutes. Patient was put under chloroform, and delivery completed by the house surgeon with some difficulty of a stillborn child. The pelvis appeared to be contracted, but the diagonal conjugate was not measured. The perineum was badly torn, the laceration reaching to but not penetrating the sphincter ani muscle, and extending about 1½ in. up the posterior vaginal wall. This wound was closed by two stitches of catgut in the posterior vaginal wall and three stitches in the perineum.

29th October.—This morning patient had two seizures similar to last night's. In the second fit she shouted loudly. One dr. of potas. brom. and 20 gr. of chloral hydrat. were given *per rectum*, and a whiff of chloroform brought the attack to an end. Her struggles have caused two of the perineal stitches to give way. The urine examined to-day contains a small quantity of albumen and a reddish deposit having the appearance of containing blood and giving blood reaction. Microscopically there are seen granular tube-casts, red blood corpuscles, and some amorphous matter.

30th October.—Patient has had no fits to-day, but is in a dazed and stupid condition. She is put upon the following mixture:—℞. 160 gr. each of pot. brom. et ammon. brom., ½ oz. of tinct. hyoscyami, 48 drops of liq. arsenicalis, ½ oz. of tinct. card. co., aquam ad 8 oz.; ½ oz. thrice daily.

1st November.—Last night patient's temperature went up to 104·2°, and this morning it is 102°. The pulse has been rapid and weak to-day—130 to 150—and respirations are rapid. She complains of no special abdominal pain. The tongue is furred. The lochia to-day has been fœtid. The perineal stitches have all given way, and the tear has reopened, its opposing surfaces being covered with a grey slough. As, however, this condition was not held to account for the pyrexia and the lochial fœtor, the uterus was douched to-night. Patient has had no fits for three days, but she is very listless and stupid, and still complains a little of headache. The urine contains a trace of albumen to-day, but the blood has gone.

2nd November.—Bromide mixture stopped, and a ½ oz. of whisky ordered every four hours. She was very restless last night, and was given 1 dr. of syrup of chloral, after which she slept. The uterus was curetted to-day under chloroform, the operation being attended by smart hæmorrhage checked by the hot douche.

3rd November.—During last night patient's temperature fell to 97·2° and her pulse to 100. The lochia is now sweet, and there has been no further hæmorrhage. The improvement, however, has not been maintained, for during this afternoon her temperature and pulse have again risen, patient has been very restless, and she complains of abdominal pain. She lies with her knees flexed, and cries when the abdomen is touched, although she can be got, on distracting her attention, to permit a fair amount of pressure. The fundus uteri is about the level of the umbilicus, and displaced to the right. Patient had a convulsive seizure this afternoon, but it wanted the distinct epileptic characters which former fits presented. She was very excitable after it, crying a great deal, and to-night she shows a tendency to delirium.

4th November.—Passed a fairly quiet night after 10 gr. of Dover's powder. To-day a mixture is given containing quinine, nux vomica, and strophanthus.

5th November.—Temperature has ranged between 102° and 104°, and the lochia has again become fœtid. Although in some respects patient has shown signs of improvement, Dr. Oliphant considered her removal desirable, and she was sent to Belvidere to-night.

She was dismissed from Belvidere, recovered, on 30th Dec.

CASE X.—L. T., aged 18, primipara, admitted 29th October, 1896, at 9·30 P.M., and delivered same date at 11·15 P.M. Duration of labour, first and second stages, twenty-four hours; third stage, twenty minutes. Child born alive; presented vertex L.O.A.; male; mature; weight, 9¼ lb.; length, 21 in.

3rd November.—Patient passed a small piece of membrane two days ago. Last night her temperature, previously normal, went up to 104°, and has remained high all day. Uterus douched to-night.

4th November.—Temperature did not fall after douching. Uterus curetted to-day, and a quantity of material like placental *débris* removed. There has been no lochial fœtor.

7th November.—Temperature still high, although falling. Sent to Belvidere.

23rd January.—Dismissed from Belvidere recovered.

CASE XI.—H. H., aged 18, primipara, admitted as boarder on 15th July, 1896, and delivered on 30th October, at 4·20 P.M. Duration of labour, first and second stages, thirteen hours; third stage, twenty minutes. Child born alive; presenting vertex R.O.A.; male; mature; weight, 6½ lb.; length, 19 in. Forceps applied at outlet for inertia after second stage had lasted fully three hours. Child has slight facial paralysis.

10th November.—On the 8th instant patient, who had so far progressed perfectly favourably, had two rigors, and her temperature rose over 103°. As it has not since come down she is to-day sent to Belvidere. No local symptoms.

12th November.—Since admission to Belvidere her temperature has been normal.

21st November.—This girl left Belvidere to-day. During her residence there her temperature was normal and symptoms entirely negative.

Lastly, I will read notes of a case which went to an asylum. She was admitted under my care, but delivered under Dr. Oliphant's.

CASE XII. *Chorea.*—Mrs. C., aged 19, admitted from Royal Infirmary on 5th April, 1896, with chorea. She is in her second pregnancy. Her first child was stillborn, premature, in January, 1895. There is a suspicion of specific taint in the father. Chorea began to develop early in February of this year, and she was admitted to the Royal Infirmary on 29th February. At the time of admission to the Royal choreic movements were violent, but they improved under rest and treatment. Patient believes she is seven months pregnant. The external os admits a finger; the internal is closed. The fundus uteri is about two finger-breadths above the umbilicus. There are jerking movements of the left arm and hand. The facial muscles are also involved, more on the left side than the right. The movements extend to the left leg, but not so marked, and sometimes also to the right leg and arm. She is readily excited. There is no definite rheumatic history. Both at the base of the heart and at the mitral area the first sound is prolonged, and the second accentuated; but there is no definite murmur. Pulse of moderate tension, regular, 76.

6th April.—Passed a rather restless night on the 5th in spite of 15 drops of Battley's solution twice. This morning she had an attack of screaming and violent movements, but was readily quieted.

7th April.—Last night she slept fairly well without a hypnotic. During sleep the movements are slight, but only cease in deep sleep. Patient's condition is improved to-day; she is much quieter.

9th April.—Given 7½ drops liq. arsenic et hydrarg. iodid. six-hourly.

13th April.—The movements, on the whole, are less, but patient has had several attacks of screaming, hysterical in character. She also manifests delusions, imagining that people are shouting at her from the street and looking in at the window. To-day she had an attack of screaming which lasted for an hour and a half. On the nights of the 9th and 10th she was sleepless.

17th April.—She is now getting 15-drop doses of liq. arsen. et hydrarg. iodid. The movements are less. Her mental condition is rather worse; she answers direct questions sensibly enough, but she has still the delusions above noted, and she is childishly unreasonable at times—*e.g.*, because her face was not washed on demand, &c. On the nights of 14th and 15th she slept fairly well after 30 grs. of sulphonal, and yesterday and to-day have been quiet days.

26th April.—She is getting 20-drop doses of the liq. arsen. et hydrarg. iodid. now six-hourly. She is quieter, but is still suspicious and unreasonable, and has delusions of sight and hearing. She is sleeping and feeding well.

2nd May.—The question of induction of labour was raised on account of the mental condition of patient; physically she is improving. Chloroform was administered to-day, and Dr. Oliphant on examining found the os internum admitted the tip of one finger, and with dilating it he got it to admit two. Cervix soft.

3rd May.—Some "show," suggestive of progressing labour. She is not examined, as it excites her.

4th May.—She was normally delivered at 6·50 P.M. of a child 17 inches long and weighing 4½ lb., premature, but healthy. The size of the child is interesting, as the fundus uteri rose very little during her stay in hospital, being on 2nd May not more than a third of the distance between the umbilicus and the ensiform. She was greatly excited during delivery, requiring restraint during the second stage.

16th May.—To-day she has been transferred to Woodilee Asylum. A slight improvement has occurred since delivery. She sleeps well and the movements are less. She now shows more tendency to originate conversation, but she has the same delusions. Baby is healthy.

For the following notes of her subsequent history I am indebted to the kindness of Dr. Blair, of Woodilee Asylum:—

"WOODILEE ASYLUM,
"LENZIE, *10th May, 1897.*

"Mrs. C., aged 19½, married, was admitted to Woodilee Asylum on 16th May, 1896, labouring under acute dementia, and a victim of chorea gravidarum. The medical certificates on admission state that the patient was confused in mind and had hallucinations of hearing—people were always shouting after her. She was very restless and sleepless.

"On admission patient was very anæmic. Irregular tumultuous movements were present in the left side of the face, and there were similar uncontrollable movements of the whole left side of the body. The tongue is protruded and retracted in a jerky manner, and is coated white and somewhat dry. Appetite is poor; bowels constipated. The breasts are much distended with milk, and the blood-vessels are congested. The patient is somewhat emaciated; reflexes equal, easily elicited; sensation intact; no paralysis is evident anywhere. R.M. healthy. A V.S. mitral murmur is audible, and the second aortic and tricuspid sounds are accentuated.

"Mentally she is slightly confused, and her memory slightly defective. Her manner and conduct are childish and foolish. She is easily pleased and as easily irritated and upset. She has a somewhat dejected appearance.

"*18th May.*—Is improved mentally and is talking very sensibly, though at times is confused and defective in memory.

"*20th May.*—Takes food well, but is unable to do much work on account of chorea. The choreic movements are not so pronounced. Is sleeping well.

"*5th June.*—Is much better in every way. The choreic movements have almost disappeared. She works well, is cheerful, and anxious for home.

"*13th June.*—Discharged recovered."

CURRENT TOPIC.

PRESENTATION OF A SEAL TO THE GLASGOW EASTERN MEDICAL SOCIETY.—On another page we print the opening address of Dr. William Findlay, President of the Eastern Medical Society. He took as the subject of his address the motto engraved on the seal, which presents to us, in profile, a portrait of the brothers John and William Hunter. The seal, which is a work of art of high merit, was presented to the Society, in memory of her husband, the first president, by Mrs. George R. Mather, and the design for it was from the pencil of Mr. William Findlay, a son of the present president. The work of having the seal cut was entrusted to Mr. Robert Scott, jeweller.

MEETINGS OF SOCIETIES.

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1896-97.

MEETING VIII.—28TH APRIL, 1897.

The President, DR. MALCOLM BLACK, *in the Chair.*

I.—NOTES ON A CASE OF PYÆMIA TREATED BY ANTISTREPTOCOCCIC SERUM.

BY DR. E. ARTHUR GIBSON.

As the serum treatment of septic diseases of the puerperium is at present on its trial, I have thought that the notes of the following case might be of some interest to you:—

Mrs. L., æt. 25, primipara, was delivered of a full term living child on 22nd January last. Her doctor, to whom I am indebted for the notes of the case, informed me that the presentation was an occipito-posterior one, and was delivered as such, after a tedious labour, by forceps. The perineum was torn and sutured. The perineum healed, except that the most anterior stitch cut out, and the puerperium was apyretic and apparently normal, the patient getting up on the tenth day. On 6th February—*i e.*, fifteen days after labour—she had a slight rigor, and her temperature was taken by the nurse and found to be 102°; when the doctor arrived about an hour afterwards he found the temperature to be 101°. The vagina was douched with Condy's fluid, and the patient was given quinine. Next morning—*i. e.*, the 7th February—the temperature was under 100°, and the patient seemed very well. However, in the evening she had another rigor, and the temperature rose to 105°. The next day—*i. e.*, 8th February—the temperature remained at 103°, and the uterus was douched with 1 per cent creolin solution; about two hours after this she had a most severe rigor, which lasted fully half an hour, and the temperature rose to 107°. She was put in a cold pack, and the temperature came down to 103°. On the evening of the 9th February the temperature was again 105°, and the uterus was again douched with creolin solution. This was followed by another very severe rigor, and the temperature rose to 106·4°. I saw her the next morning—*i. e.*, 10th February—for the first time. Her condition then was, temperature, 104; pulse, 130 and very soft. Perspiring freely; marked anxious appearance, abdomen soft, and not at all tender; the lochia were almost dried up, and not at all fœtid; the perineum showed a small granulating wound, apparently quite healthy, in the region of the fourchette. *Per vaginam.*—The cervix was split on both sides, but I did not examine the fornices firmly for fear of crushing the thrombosed veins, and so setting free fresh infection. I could make out nothing abnormal in the chest, and the urine was free from albumen.

I advised that she should have injections of antistreptococcic serum, and at 1 P.M. on the same day 10 cc. of Marmorek's antistreptococcic serum were injected, at that time the temperature being 104°. In two hours the temperature had fallen to 101°. At 9 P.M. it was 102°, when another 10 cc. of the serum were injected. After this she got a good sleep, which she had not since the second rigor, and felt much refreshed in the morning. Next morning—*i. e.*, 11th February—temperature was 100·8°. I saw her again in the afternoon, and there was marked improvement in her appearance, the characteristic anxious look having to a great extent gone; her pulse was 110, and not so soft as the day before; temperature was 102°. She had another injection of the serum at night. Next morning—*i. e.*, 12th February—temperature was under 100°, but rose in the evening to 101°, when another injection of serum was given.

The next evening (13th February) temperature was 100·4°, when the fifth and last injection was given. After this the temperature never rose to 100°, and she gradually gained strength, and was able to leave her bed in about three weeks.

II.—NOTES OF A CASE OF SEPTIC INFECTION AFTER CHILDBIRTH SUCCESSFULLY TREATED BY ANTISTREPTOCOCCIC SERUM.

By Dr. J. Munro Campbell.

Mrs. H., aged 24, primipara, was confined on the 3rd February, 1897. The labour was tedious, but natural. No chloroform was given, and the forceps was not used. The perineum was lacerated, but was not stitched. I was informed by the doctor who attended in my absence that the patient was during the last stage very excited, and extremely exhausted at the termination of the labour. I saw her a day or two after the confinement, when she was still rather nervous, but doing fairly well. On the twelfth day, however, she suddenly became worse, and by next day her temperature was 103°; pulse, 145. Lochia scant and offensive, milk secretion suppressed, urine retained, tongue clean. Profuse perspirations were present, and the patient rapidly became delirious, and refused every form of nourishment. The case was clearly a desperate one, and after consultation with my partner, Dr. Ritchie, it was agreed to at once use the antistreptococcic serum; 10 cc. were injected at 8 P.M. on this day. At 8 A.M. next day temperature was 102°; pulse, 130; patient still delirious and perspiring profusely; 20 cc. of serum were now injected. On the evening of that day the temperature had fallen to 101°; pulse, 130; patient was rather more rational.

On the 17th the morning temperature was 101·4°; pulse, 120; evening temperature, 102·6°; pulse, 140; 10 cc. of serum again injected, and this dose was repeated on the 18th and 19th February. On these days severe diarrhœa was present, the stools being very offensive, and the patient passing them unconsciously.

On the morning of the 21st the pulse had fallen to 112, and the temperature to 99°; the patient took nourishment freely, and was much more rational. For a fortnight after this date the pulse and temperature were rather above normal, but the progress of the patient towards recovery was practically uninterrupted.

I would like to direct attention to the following points:—

1. The serum was give early and freely; 60 cc. were injected

in five days. No local irritation resulted from the injections, which were given into the subcutaneous tissue of the abdomen under the very strictest antiseptic precautions.

2. Immediate improvement was manifest after the first dose, the patient never relapsing into the desperate condition of the 15th February. Doses given in the evening were followed by much greater improvement than doses given in the morning.

3. The other means employed included uterine douching with perchloride of mercury (1 in 4000), twice daily; vaginal douche of carbolic (1 in 80), every four hours. Iron and quinine were the chief internal remedies used.

4. Except that the perineal laceration was found on the 15th to be foul and covered with pus, and that some tenderness was complained of over the uterus, there was nothing to indicate that local mischief might account for the temperature and other symptoms. Unfortunately, bacteriological examination was omitted, the case being a very anxious one, and apparently a very clear one of puerperal septicæmia.

In the discussion it was pointed out that in the last-mentioned case the result could not be ascribed for a certainty to the action of the serum, as intra-uterine douches had been used, and quinine and iron had been given.

III.—A SERIES OF CASES OF ECTOPIC PREGNANCIES, WITH REMARKS ON DIAGNOSIS AND TREATMENT.

By Dr. John Edgar.

This paper has been printed in full at p. 187 and p. 253 of this *Journal.*

Meeting IX.—26th May, 1897.

The President, Dr. Malcolm Black, *in the Chair.*

I.—SPECIMEN.

Dr. Oliphant showed a large fibrous tumour which had been removed by Dr. Dalziel from the vulva of a patient aged 50. It occupied the left labium far back, and had been growing for ten years. It was encapsuled, and was easily shelled out. A microscopical section was also shown.

II.—A NEW FORM OF CEPHALOTRIBE.

By Professor Murdoch Cameron.

In Professor Cameron's absence, Dr. Jardine showed the cephalotribe, and explained the various points. Discussion was postponed till Professor Cameron should be able to be present.

III.—A YEAR'S WORK AT THE GLASGOW MATERNITY HOSPITAL, WITH NOTES OF CASES.

By Dr. Malcolm Black.

Dr Black's paper appears as an original article in our present issue at p. 362.

Dr. Oliphant said that the last case described by Dr. Black was a very difficult one, and one could get no help from books or from any other source on such a case. He had never seen her markedly insane, but the house surgeon had reported that she had had delusions. The chief point in Dr. Black's report, however, was the death-rate and the septic condition of the hospital. He (Dr. Oliphant) had now been pretty long connected with the hospital, and he had never seen it completely free from septic cases. It was not a suitable place for crowding with serious cases for abdominal and other operative work. It was entirely open, and there were no means of complete isolation of a patient and her attendants when this was necessary. The mortuary arrangements were also defective. They had done what could be done with regard to antiseptics in individual cases. The Belvidere cases were not the only septic cases. They had also sore eyes, breast absceses, cellulitis, &c., altogether too many instances of a septic condition.

Dr. W. L. Reid said the report was bristling with interesting points. It was, perhaps, unfair to criticise it from the point of view of mortality. In the fourth fatal case reported it was difficult to believe that the patient had died of syncope unless she had sat up.

Dr. Jardine referred to the value of such periodical reports, and promised similar reports during his term of office. The septic state of the hospital was the most important point in the paper. The hospital had since been cleaned at the beginning of his time on duty, and things went well for a little, but temperatures soon again began to run up and down. On investigation, streptococci were found in the napkins used for the patients. A steriliser had now been got. Vaginal examination of the patients was also restricted, and only after thorough cleansing of the external genitals and of the hands. The use of vaseline was stopped, and the intra-uterine douche was hardly ever given, except in operative cases. The hospital was also again being cleaned.

Dr. Edgar asked if the delusions referred to in the last case reported were the ordinary delusions of chorea, and it was replied that dementia was the diagnosis of the authorities of Woodilee Asylum.

Dr. Balfour Marshall suggested that the death reported as due to fatal syncope might be caused by a pulmonary embolism.

REVIEWS.

Clinical Manual of Mental Diseases, for Practitioners and Students. By A. Campbell Clark, M.D. London: Baillière, Tindall & Cox. 1897.

It has been said that the medico-psychological is at the present time the least progressive of all departments in medicine. This statement is strongly repudiated by our asylum superintendents; but they must admit that, as regards treatment, the past ten years have shown little advance, save indirectly in asylum construction and in endeavours to promote the education of asylum attendants. The pathology of morbid mentalisation is beset with enormous difficulties, but alienists point with pride to the researches being made in our asylums of to-day, and to the valuable results already obtained.

It comes as a surprise and a disappointment to learn from one so well-known and experienced as Dr. Campbell Clark of Hartwood, that "the pathology of insanity has yet to be written, that we have to retrace our steps and begin *de novo*, since Dr. Hutchison, of Edinburgh, has observed vacuolation of nerve cells, pigmentary degeneration, &c., in brains reputedly normal." After this manner runs the preface of Dr. Clark's recently published *Manual of Mental Diseases*, a book in which "no pathological teaching will be found." This is regrettable. Symptoms we regard but as the words of a riddle. Pathology is the oracle to which the perplexed look for light. The author might at least have favoured us with his *post-mortem* results in general paralysis and dementia, for here his experience must be large, and, if we may venture to contradict him, of considerable value.

In a book on insanity which is purely clinical, it is very difficult to say anything new. It is equally hard to write a compilation that can supersede such popular and attractive works as those of Blandford, Savage, or Clouston. Dr. Clark has given us no mere compilation. His personality dominates every page. The style, though somewhat lacking in dignity, and occasionally marred by looseness of expression, is nevertheless vivid and realistic, and neither ponderous nor obscure.

Following the introductory chapters on mind in health is a lengthy discussion of insomnia and its treatment. The importance of this symptom in the early stages of mental disease completely justifies the departure, even though there can be little to add to established routine practice. In dealing with the causation of insanity, the difficulty of arriving at precise knowledge as to the correct measure filled by heredity, and the ambiguity and confusion arising between factors predisposing and causes exciting, are very clearly set forth; but why are all other etiological units massed together at the end of the chapter without comment?

The various forms of insanity are then dealt with, there being some variation on the usual grouping. Appended to each description are numerous clinical illustrations. These are well chosen; and, although somewhat meagre at times, are obviously condensed on purpose to display special features and striking contrasts that in fuller reports might be submerged and lost. Verbatim examples are given of the language of the insane, and of questions and answers in cases of all kinds. These have the merit of pictures that are true to nature, though they are sometimes unavoidably Zolaesque. The book is illustrated by a large number of excellent photographs, the selection of which shows apt discrimination.

The author says that "a book must stand or fall very much on its own merits." This book has merit enough of its own to stand upon; and, had Dr. Clark been pleased to give us what there is on the pathology of the insanities, its standing-room had been much wider. Had he, on the other hand, confined himself to puerperal insanity, probably the best written chapter in the book, he could have extended our knowledge far beyond the teaching of ordinary clinical manuals. If his success be not commensurate with the knowledge and pains displayed, the reason will lie in this solely, that the clinical standpoint is already fully occupied.

Practical Muscle Testing and the Treatment of Muscular Atrophies. By W. S. HEDLEY, M.D. With Illustrations. London: H. K. Lewis. 1897.

THIS little volume bears the marks of having been written by one who has studied his subject to some purpose, both theoretically and practically. It differs from the ordinary text-book of medical electricity in giving us very little in the way of physical science, but what is given is to the point. "Practical Muscle Testing" includes the examination of muscles by a study of voluntary contraction and the signs of paralysis, as well as by electrical exploration. In the second part of the work ("Treatment of Muscular Atrophies"), we get first a classification of the muscular atrophies, and then directions for electrical treatment by various methods. Other therapeutic agents employed are Ling's (the "Swedish") system of exercises, passive manipulations, drugs, heat, counter-irritation, &c.

The book is well-written and thoroughly practical. We are glad to find the author emphasising the importance of attending to the "density," as well as the "intensity," of the currents which are employed to induce muscular contraction; the need for this is not sufficiently recognised. As to success in treatment, we fear that Dr. Hedley is not yet in a position to make the outlook more hopeful. If his directions are followed, good may result in the way of preventing the injudicious and harmful administration of electricity, but the arrest, at least for a time, of the progress of muscular atrophy is a familiar fact, and actual increase of strength—doubtless from hypertrophy of surviving fibres—is by no means unknown. No results yet obtained appear to be more encouraging than those reported by Gowers as having followed the daily hypodermic injection of a small dose of strychnia.

Nervous Affections of the Hand and Other Clinical Studies. By GEORGE VIVIAN POORE, M.D., F.R.C.P. London: Smith, Elder & Co. 1897.

THESE lectures and essays have already appeared in print, but many of them are well worth republication. The first one, which gives its title to the book, constituted the Bradshawe Lecture for 1881. This is followed by additional and important papers on the "professional neuroses"—the cramps of writers, compositors, tailors, goldbeaters, hammermen, sawyers, violinists, pianoforte players, and others. The seventh chapter is on spinal myelitis. Then follow papers on poisoning by phosphorus, by lead, and by food, and on auto-intoxication. Dr. Poore calls attention to the striking resemblance between the phenomena and etiological associations of phosphorus poisoning and those of acute yellow atrophy of the liver, and, in view of the facts brought together in his discussion of the question, he is perhaps justified in asserting that, "clinically and pathologically, the two conditions are indistinguishable." In connection with the case of auto-intoxication, Dr. Poore suggests that a copious draught of cold water may have caused a flow of blood into the abdominal vessels, and so produced sufficient cerebral anæmia to account for the loss of consciousness. We are inclined to think that the immediate result of a copious cold draught is contraction of the abdominal vessels, which tends to cause hyperæmia elsewhere—for instance, in the lungs. Other papers are on a case of gout, on hæmaturia following influenza, and on the relation of albuminuria to life assurance. Then follow chapters on congenital heart disease, and on the management of chronic heart disease and of pulmonary tuberculosis. Dr. Poore remarks that "tuberculosis has been frequently recorded in conjunction with congenital cyanosis, and there is no justification for the statement which has been made that these conditions of the heart are antagonistic to tuberculosis." We should think it is now pretty well known that the apparent antagonism between cardiac disease and pulmonary tubercle does not extend to congenital heart disease. On the contrary, in a large proportion of cases of congenital malformation of the heart, if life be sufficiently prolonged, pulmonary tubercle ultimately supervenes. The remaining chapters of the book are on tumour of the lung, sulphur waters of the Pyrenees, and laryngeal spasm.

The physician will find much that is of interest and much that is of importance in this volume, and the style is such that its perusal may be made with pleasure.

The Dwelling-house. By GEORGE VIVIAN POORE, M.D.
London: Longmans, Green & Co. 1897.

THE larger part of this very thoughtful book consists of addresses which have been delivered and papers which have been published by the author from time to time, and it deals with such important subjects as defective planning of houses, the sanitation of the isolated dwelling, the causes and effects of overcrowding, and the soil in relation to disease and sanitation. To all of these subjects the author has given much consideration, the fruit of which he lays before the reader. Dealing with the defective planning of houses in populous places, where space is limited by reason of cost of site, he draws attention to the relation, architecturally, of the soil-disposal apparatus of the house to the rooms for occupation, and he points out, very properly, that in the bulk of one-tenanted flatted houses the arrangements are such that the air of the water-closet apparatus is bound to circulate in the living-rooms, *i. e.*, enters into the common air-supply of the house, by reason of imperfect means of ventilation of the apartment. This is not only true of self-contained houses, but it is also still more true of tenement-flatted houses, where each flat is occupied by one or more tenants. He shows the plan of an average self-contained house in a good London neighbourhood, and he has no difficulty in showing, as he puts it, "that the internal channels of communication, instead of serving for the the supply of fresh air, merely facilitate the exchange of foul air." We do not know whether the attention of the author has been directed to the large increase in flatted houses in such wealthy districts as Kensington, and to the relation of the sanitary fittings of these flats to the living-rooms, but he would, undoubtedly, find his thesis more amply proved in respect of them, since the foul atmosphere of the closet-room, by reason of the higher temperature of the other rooms, is bound to circulate in these before it can possibly escape. In a smoky city, like Glasgow, it can easily be demonstrated by the disposition of the soot round the window of the closet, which opens on the common landing, that the current of air is from the landing, through the closet, into the living-rooms, and not, as was once supposed, in the opposite direction. We entirely agree with the author in his views, and, that the sooner better architectural arrangements are secured, the better. He gives some excellent advice, too, regarding the site and plan of a house in a neighbourhood where there is plenty of elbow-room, but, it appears to us, that the chief sanitary difficulty applies to the houses of a populous district where a choice of house must be made from houses whose sites and surroundings are not conducive to *beau ideal* sanitation, and where the choice ranges from bad to indifferent, and but rarely reaches to good. In speaking of the height of rooms in relation to ventilation, the author believes that, where the windows extend to within a few inches of the ceiling, no domestic living-room need be higher than ten, and no bedroom than nine feet. This is a view which was prominently put forward by Mr. Honeyman, of our own city, several years ago. If the superficial floor-space be sufficient, there can be no good reason urged against it, since the windows, constructed as is proposed, are calculated to provide the best available light, and to serve the best purpose for the ventilation of the upper stratum of air of the room, which usually is the fouler.

One of the most interesting chapters of the book is that which recounts the author's experiments in practical sanitation in his little country house in Andover, and which are familiar, to some extent, to those who have read his *Essays on Rural Hygiene.* These experiments cost not a little money, and consist in the daily application to the soil of a garden, of about 1¼ acre, of the "dry catch" of about one hundred people, and to the establishment, in the centre of this garden so manured, of a shallow well so constructed that the water which lodges there can only reach the well by upward filtration. From the former of these experiments he believes that 600 square yards of soil are sufficient to dispose sanitarily of the excreta of about one hundred persons per annum, and from the latter, that water collected as described—the well being but 5 feet deep, and the water-level usually about 3 feet 6 inches from the bottom—can be obtained of great purity, chemically and biologically.

The author has great belief in the powers of humus for the conversion of organic *débris* into harmless inorganic materials by the agency of fungi and micro-organisms; in this, probably, few will disagree. The practical questions, however, arise—would water, collected in such a manner, in the present knowledge by our rural communities of sanitation, be safe, under average circumstances, for potable purposes over any length of time? Experience has demonstrated quite the contrary, and, deplore it how we may, we are always at the mercy of the careless and the ignorant. Again, would it be practicable to introduce the system of earth closets, or even the "dry catch," into municipalities? It is true that the author confines himself to the advocacy of the extension of this system in rural communities, but we cannot help feeling that he believes it practicable for populous communities, since he instances the weight of municipal pails wherein excreta is removed, and the ponderous waggons in use for their removal. Unfortunately, we are not able, to use the Irishism, to remove our towns into the country; and we must also recognise that, while segregation of people has certain advantages, it also has grave disadvantages, and among these latter are excreta disposal, water-supply, and impurity of atmosphere. Each person must take his risks, just as he does who voluntarily participates in a risky occupation. Let us minimise, or remove if we can, the risks, but let us first recognise their presence. No sanitarian of to-day will deny that our present modes of sewage-disposal are unsatisfactory for the *purposes of the land,* and that much valuable material, toward this end, is lost, but he has to face the problem—are these modes satisfactory for the people? There can hardly be a doubt that the carrying-out of suitable schemes by municipalities has been beneficial for their citizens. We say suitable schemes, because we believe that many unsuitable schemes have been fulfilled *quâ* individual places.

In the chapter on overcrowding, its causes and effects, the author deplores the causes, which are chiefly cost of site, and, therefore, insufficiency of curtilage, but which are aided in their evil effects by the building regulations of modern days. Probably, if we had the building anew of our cities, with our present knowledge we should do it quite differently, but we are the heirs of the centuries, and we can but tinker with what has been bequeathed to us. But no model building laws, for an ancient populous place, or model bye-laws can ever be suitable for a rural and rising place, or even for a rising suburb, and we concur with the author's views in this respect. We must accept the situation, and do the best we can for the old, and show, for the new, that we have profited by our experience.

The direct relation of mortality to overcrowding is too obvious to demand much comment, and we can only expect a higher death-rate in our populous places from this cause alone. To make such radical alterations in our city streets of houses as would meet modern sanitary demands means compensation, and consequent increased taxation, which, we fear, is not likely to come within the range of practical politics. In suggesting remedies for overcrowding, the author frankly acknowledges that little can be done for big towns, but he would encourage the man who, in a suburban community, builds a house with ample curtilage or elbow-room. He boldly affirms that (p. 116) "sanitary legislation is founded on a basis of mischievous lop-sided socialism, in which the sanitary well-doer is heavily taxed for the support of the jerry-builder, and is called upon to pay for all the shortcomings of the negligent and filthy." But is not all legislation built upon the lines of overtaking the evildoer, and at the expense of the welldoer? "They that are well need not a physician, but they that are sick." It is the welldoer who has to pay for the detection of the criminal; and in sanitary legislation the welldoer has to pay for the illdoer for the direct good of the community, of which he is a unit, and, indirectly, for his own good. The author is of opinion that the ratepayer ought to be able to obtain his water by meter, as he does gas, and pay for what he consumes. There could be no possible objection to this, provided it could be assured that each consumer would consume what was needful for the cleanliness of the person and of the home. But is that likely to be ensured in the slums? There can only be one answer. We can see the force of this argument where water is dear, but not where it is cheap. And so with sewerage. He would put on an increasing rate as the number of sanitary appliances increases; in short, he would penalise such fittings much in the same way as the light was kept out of dwellings by the window-tax. He, further, is of opinion that the only equitable mode of assessing for rates is to reckon by the cubic contents of the building. But we must avoid entering into a consideration of this. In respect, however, of the views he expresses regarding water-supply, sewerage, &c., we believe that we see the views—if not in their entirety, at least in their substance—of Herbert Spencer, who, in his *Social Statics*, and particularly in *The Man versus the State*, holds strongly that state or municipal sanitary administration is wrong; that compulsory taxation for drainage, for paving, and lighting, and water, and gas is wrong, because it extracts from the ratepayer more money than is necessary for the sufficient protection of his individual rights. Viewed in the light of the legal axiom with which he prefaces his inquiry, that "every man has freedom to do all that he wills, provided he infringes not the equal freedom of any other man," Spencer's conclusions are perhaps logical, but in practice the evil-doing of one man has, upon occasion, the same effect upon his fellow-citizens that a stone cast into the middle of a pond has upon the contained mass of water; in other words, the careless neighbour is a menace not only to himself but to all around him, and the careful must be protected against the careless by the adoption of a general or communised plan, whereby, at least, the effects of the carelessness will produce the minimum amount of mischief.

Speaking of the work generally, we can but express the view that the author has opened up fresh channels of thought on sanitary subjects, and that it will afford its reader not a little pleasure and a good deal of profit.

The Edinburgh Medical Journal. Edited by G. A. GIBSON, M.D., F.R.C.P. Ed. New Series. Vol. I. Edinburgh and London: Young J. Pentland. 1897.

THE excellent quality of the papers contained in this volume augurs well for the future reputation of the *Edinburgh Medical Journal* under its new editor. Some of the contributions are of great importance, and there is much to interest and instruct. We congratulate Dr. Gibson and his publisher on what they have already accomplished.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

PHYSIOLOGY.

By WILLIAM SNODGRASS, M.A., M.B., C.M.

Prevention of Coagulation of Blood.—C. Delezenne has made an elaborate research (*Archiv. de Physiolog. Norm. et Patholog.*, July, 1897) in regard to substances which, when injected into the blood-vessels, prevent the coagulation of the blood. To the list of already well-known substances he adds the serum of eel's blood and extracts of its organs. He finds that these act by a mechanism similar to that of peptone, viz., that they cause *the formation by the liver* of a new product endowed with specific anticoagulating properties. He has separated a special principle which alters rapidly, but may be preserved by the addition of a few drops of chloroform, and which withstands long boiling. This substance acts on the blood of all animals in the same way as the active agent contained in the buccal secretion of the leech in the way of preventing coagulation.

Production of CO_2 and Consumption of O in the Lungs.—An experimental research on the above subject leads MM. Ch. Bohr and V. Henriques, of the University of Copenhagen, to the conclusion (*Archiv. de Physiolog. Norm. et Patholog.*, July, 1897) that the lung may cause as much as two-thirds of the respiratory exchanges (respiratory combustion). The results for different animals were very various, and even for the one animal during different parts of one experiment. In one case pulmonary combustion was entirely absent. They hold that the processes going on in the lungs are not confined, as is generally believed, to the excretion of carbonic acid gas already formed in the tissues, and to the introduction of dissociable oxygen into the blood; the lung itself plays an important part in the formation of carbonic acid gas and the fixation of oxygen. In some cases at least the respiratory processes in the tissues and lungs are demonstrably of an essentially different nature.

The Action of Certain Drugs on Biliary Secretion.—MM. Doyon and Dufourt have studied this question with the help of dogs having a biliary fistula. They found (*Archiv. de Physiolog. Norm. et Patholog.*, July, 1897) that among the substances investigated bile was the only one that augmented the quantity of solids in the biliary secretion; this augmentation was seen alike in the bile-salts, the soaps, and the fats, and was due to a stimulation of hepatic activity. The quantity of bile is notably increased with large doses of salicylate of soda, but the quantity of bile-salts, of fats, and soaps eliminated in a given time is nearly the same. Olive oil and glycerine have no cholagogic property; olive oil masks the action of bile when given in emulsion with it. Bicarbonate of soda causes no variation in the quantity of the bile, but seems to diminish the amount of bile-salts and soaps. Calomel, in purgative dose, lessens the quantity of bile by one half during the first nine hours, and by more than a quarter during the period of twenty-four hours; the amount of bile-salts and soaps diminish to less than half.

Excitation of Nerves by Electric Rays.—Danilewsky finds (*Archiv. de Physiolog. Norm. et Patholog.*, July, 1897) that, given sufficient tension of induced current in a secondary coil, we can produce in a nerve in the vicinity of the coil and with the secondary current completely closed, by way of induction, an oscillatory electric state sufficient to stimulate the nerve. Thus, not only the electric potential itself, but also the oscillations of this potential in these conditions may rouse the nerve molecules to a state of activity. But the frequency of application of the electric irritation must not pass a certain maximum. If, in the primary coil, the interruptions of the current are very numerous, several thousands of times per second for example, we find the absence of excitatory reaction on the part of the motor nerve in spite of the high potential and large amplitude of the electric oscillations.

SURGERY.

By GRANT ANDREW, M.B., C.M.

Surgery of the Stomach and Intestines.—In an editorial article in the May issue of the *Annals of Surgery* a review is given by Charles L. Gibson, of New York, of Wölfler's work in abdominal surgery (*Verhandlungen der deutschen Gesellschaft für Chirurgie*, xxv Congress, 1896).

The statistical part of this review is what one would particularly wish to draw attention to, so that this might be compared with the statistics of Czerny published later:—

First, in regard to *resection of the intestine in general.*—From observations collected with the assistance of Gussenbauer, Mickulicz, Hahn, Gersuny, Kappeler, and Lauenstein, the mortality in resections is found to be 39½ per cent. Between 1875 and 1888 the mortality was 42 per cent—85 resections; between 1888 and 1895 mortality was 36 per cent—161 resections. Dividing the sum total of resections according to region of intestine involved shows the following result:—Small intestine, mortality, 30 per cent; ileo-cæcal portion, 42 per cent; large intestine, 49 per cent.

Immediate results as influenced by nature of disease.—78 resections for artificial anus—78 per cent cure; 71 resections for artificial anus—68 per cent cure (Gotz); 34 resections for tuberculosis of intestine—73 per cent cure; 20 resections for cicatricial contraction—65 per cent cure; 114 resections for new growth—46 per cent cure. Resection, then, for new growths has thus the greatest mortality, and for artificial anus least.

Direct operative result in pylorectomy.—Up to 1885, mortality 73 per cent (Winslow); up to 1890, mortality 58 per cent (Guinard); from 1885 to 1892, mortality 34 per cent (Zeller); from 1888 to 1896, mortality 31·2 per cent (Wölfler), the latter involving 173 operations by fifteen observers. Excision of pylorus for cicatricial contraction gives a mortality of 10 per cent.

Direct operative result in gastro-enterostomy.—Up to 1885, mortality was 55·6 per cent; after 1888, mortality 36 per cent, involving 219 operations (Wölfler); between 1881 and 1885, mortality 70 per cent (Zeller); between 1886 and 1892, mortality 38·7 per cent (Zeller).

In gastrostomy.—From 1849 to 1883, mortality 77·7 per cent; from 1883 to 1886, mortality 37 per cent. Compare these results with Czerny's—the result of intestinal operations performed in the Heidelberg Clinic during the past four years (*Beiträge zur klinischen Chirurgie*, Band xvii, Heft 3; *Annals of Surgery*, September, 1897). 70 intestinal operations are recorded. The results are given in the form of a table, but might be simplified thus:—

Resection was performed in 16 cases of carcinoma, 2 of sarcoma, 20 cases of tuberculosis, 1 of actinomycosis, 3 of invagination, 14 of artificial anus, with the the result that of these 30 were cured, 4 not cured, and 13 died, giving a mortality of 28·6 per cent out of a total of 56 cases—a mortality of 10 per cent less than the figures published by Wölfler.

Entero-anastomosis was performed on 2 occasions for carcinoma, 1 for sarcoma, 4 for tuberculosis, 6 for invagination, 1 for volvulus, with a result that 9 were cured and 5 died. In 7 cases suture was used, and of these 4 were cured and 3 died, a mortality of 43·8 per cent. In 4 cases Murphy's button was used—3 cured and 1 died, a mortality of 25 per cent.

Of the 18 fatal resection cases, 13, or 72 per cent, were transverse resection. Of these 13 fatal cases, 6 died of peritonitis without leakage at the sutures, while 5 died of peritonitis as a result of insufficiency of the sutures. Of the 4 fatal results after entero-anostomosis, 3 were due to defective sutures.

Murphy's button was used in 4 entero-anastomoses and 2 resections. One fatal result was due to the button cutting through earlier on one side than the other. In the other fatal case the result cannot be ascribed to the button, but rather to the failure to respect Murphy's warning against the unnecessary Lembert suture. On the whole, the advantages of the button outweigh its disadvantages.

The objection raised against the present button by some—that its use entails a subsequent cicatricial stenosis of the gut—has not been verified in Czerny's clinic.

The Appendix "in the Interval"—A New Method of Studying its Pathology.—Under the above heading, Abbe, of New York, in the *Medical Record*, 10th July, 1897, describes a method of examining the appendix after its removal which demonstrates "the exact pathology of its diseased structure, shows the cause of appendicitis in its several varieties, and demonstrates to the eye that which gives an explanation of the clinical symptoms of chronic cases." A few hours after removal the appendix is distended with 95 per cent alcohol through the conical nozzle of a small syringe tied tightly into its cut end by a ligature, which is tightened as the syringe is withdrawn. The distended organ is then immersed twenty-four hours or more in alcohol of same strength. It is then ready for section. If opened centrally from end to end the interior (if the patient has had one or more attacks) will show one or several of the following conditions:—

1. A fæcal concretion blocking the canal.
2. Interior ulcerations.
3. Cicatricial strictures, often of a pinhole aperture only.
4. Multiple stricture with intermediate pockets containing suppurative and catarrhal products, and confined by greatly hypertrophied muscular and mucous coats.
5. Partial obliterating appendicitis. These forms are subject to infinite variations.

Abbe attributes the obstruction which leads to gangrene, perforation, and rupture to one of three causes:—

1. A catarrhal inflammation.
2. A natural flexure in the appendix (due usually to an abbreviated

point in the mesentery) leads to an arrest of its fæcal contents, which, being inspissated, grow into a concretion.

3. Circular ulceration of an otherwise healthy appendage from no apparent cause other than microbic.

Microscopic examination of the concretions showed them to be composed of the inspissated remnants of the contents of inflamed appendices. Pus cells made up the greater part; exfoliated epithelium cells nearly all the remaining bulk, with a smaller part composed of meat fibres and starch cells—all welded together by a great variety of bacterial *débris*.

The stages in the development of a usual case of appendicitis are summed up thus:—

1. A catarrhal inflammation of the lining mucous membrane.
2. Irregular narrowing of the calibre, with hypertrophy of the mucous and muscular coats.
3. Strictures.
4. Imprisoned food, desquamated epithelium, and pus-forming concretions.
5. Obstruction at the stricture, distension, perforation, abscess.

Abbe's conclusions are noted by Armstrong in introducing the discussion on appendicitis at the Montreal meeting of the British Medical Association (see *British Medical Journal*, p. 947, 1897).

In the *epitome* of the same issue of the *Journal*, p. 58, Grinda (*Méd. Mod.*, No. 71, 1897) is quoted as having advised, at the Moscow International Congress, a lumbo-iliac incision in those cases of suppurative appendicitis where there is especial tenderness over the triangle of Petit, as indicating a retro-cæcal collection.

The incision is made along the external border of the sacro-lumbar mass of muscle, and extended forwards at the lower extremity parallel to, and at a distance of about an inch from, the crest of the ilium, to within a distance of about an inch and a quarter from the antero-superior iliac spine. This incision is stated to be the surest and most direct method of reaching the appendix and cæcum, and less likely to result in infection of the general peritoneal cavity. The drainage is claimed as perfect, and there is little risk of hernia.

Otitis Media.—The *Sem. Méd.* (20th August) and the *Clinical Journal* (8th September) both contain articles on the subject of otitis media. In the latter Lambert Lack, under the heading of "The Indications for, and Methods of Operating on, the Mastoid," first considers the subject of acute otitis, and sums up the important points thus:—

1. That immediate operation is necessary when the classical signs of acute mastoid abscess are present; or
2. When there are symptoms pointing to pyæmia, meningitis, &c.
3. That where there are local signs of mastoiditis without much general disturbance, or symptoms of retention of pus without definite local signs, simple measures should first be tried, and operation only resorted to when these fail.
4. That operation is rarely required, and almost only in acute cases arising during the course of specific fevers.
5. That simple opening of the antrum is quite sufficient, and gives as a rule excellent results.

In regard to the treatment in chronic cases, all possible obstruction to the proper and efficient application of antiseptic remedies should be removed—*e.g.*, enlarging the perforation in the drum, removing polypi, granulations, cholesteomata.

Operation is considered necessary under the following circumstances:—

1. Cases in which acute mastoid abscess arise. Under this heading are included cases where the symptoms point to sinus thrombosis, pyæmia, meningitis, cerebral disease, &c.
2. Cases of persistently recurring aural polypi.
3. Cases of cholesteomata involving the antrum.
4. Certain cases of atresia of external meatus.

5. Cases where, if the ossicles and membrane are cleared away, the tympanum curetted, and careful treatment persevered in for *two or three months*, no marked improvement occurs.

The two methods of operating were then discussed, and support given to the more radical—that of laying open the whole of the bony cavities, antrum, aditus, attic, tympanum, and external meatus into one large smooth-walled cavity, at first partly lined by the epithelial covering of the soft parts, and ultimately entirely so.

In the former article Quervain points out the usual route of extension in middle-ear disease—(*a*) Upwards through vault; (*b*) outwards through external table of the process; (*c*) downwards mainly through the lower wall of the mastoid cells; (*d*) backward along the groove of mastoid sinus, and also through the lymph and blood channels. The more acute the variety the purer the infective agent. Secondary abscess may be—(1) Submastoid, extending behind muscles attached to mastoid process; (2) downwards into or between muscles of neck; (3) retromaxillary, submaxillary, or retropharyngeal; (4) into nape of neck from perforation of posterior part of mastoid process or digastric fossa; (5) between pericranium and occipital bone, due to perforation of external table of mastoid or about the mastoid suture.

Free trephining is regarded as the proper treatment in all cases; the abscess should be opened where fluctuation is most marked.

The external method of opening retropharyngeal collections is recommended.

See also *Clinical Journal*, 13th October, 1897—"Antrectomy as a Treatment for Chronic Purulent Otitis Media," by Arbuthnot Lane.

Hæmorrhoids.—Morris (*Matthews' Quarterly*, April, 1897), in an interesting article, gives the comparative value of methods utilised in the treatment of this disease.

The Whitehead operation is regarded as preferable, because it removes the special rectal sense apparatus. The method of injection of the pile with carbolic acid and astringents is very dangerous, because veins remain wide open to carry septic emboli to the liver or heart.

Crushing methods expose the patient to the dangers of septic embolism and septic infiltration.

The clamp and cautery method is successful in the hands of a few experts, and avoids many dangers; but the wounds often heal very tardily. Simple dilatation of the sphincter muscles is a palliative procedure only.

The best two methods, involving the least danger, are the method of ligation and excision of the pile tumours, or excision of the piles and suture of the incisions. In selected cases the latter is the author's favourite.—(*Universal Medical Journal*, July, 1897.)

DISEASES OF THE EAR.

By Dr. WALKER DOWNIE.

Of the original communications in the *Archives of Otology* for the quarter beginning July, 1897, the following may be noted:—

1. The report of two cases by Dr. Barr, Glasgow. The first was a case of "Chronic Purulent Inflammation of the Middle Ear affecting Both Sides," which proved fatal after seven years, by extension on the left side through the labyrinthine cavities and the auditory and facial nerves to the interior of the cranium. This case was described at the Glasgow Pathological and Clinical Society on 8th February, 1897. The brain and temporal bone from the second case were shown by Dr. Barr at the Glasgow Medico-Chirurgical Society in May last. It was one of "Cerebellar Suppuration caused by

Middle Ear Infection through the Internal Auditory Meatus, with Thrombosis of the Cavernous Sinuses and Basic Lepto-Meningitis."

2. "Popular Medical Superstitions concerning the Diseases of the Ear, Nose, and Throat," by Dr. Karutz, Luebeck. Here mention is made of several more or less popular prophylactic and curative measures having for the most part a superstitious or quasi-religious origin. Gold, silver, and lead earrings are said to be used all over Germany as protection against diseases of the ear. In Prussia we are told that a child remains for ever protected from throat and nose troubles if the mother at her first communion after her delivery breathes three times on the child's neck. In Chemnitz an idea prevails that if a child smells at anything before it is a year old it will never smell again; and whoever smells flowers which have been grown on a grave loses his sense of smell for life. In Bohemia you can protect yourself from hoarseness if you cry loudly with the first croaking of the frog you hear in the spring. The old stocking placed round the neck to cure sore throat must, if it is to be efficacious, we are told, have been worn on the left foot only and then turned inside out. Around the subject of "nose-bleed," or epitaxis, many superstitions hover. Several of the recommendations and incantations are here given; and it may be of interest to those who suffer from "nose-bleed," even although they cannot find consolation in the bye-gone belief, that "whoever bleeds from the left nostril will have bad luck in all his affairs."

3. A report on four cases illustrative of "Complications of Middle Ear Suppuration," by Dr. Chas. A. Thigpen, Montgomery, Ala. They are cases of mastoid empyema, one with cerebral abscess. In three recovery followed operation, and in the fatal case a description of the autopsy is given. It was a case of chronic middle ear suppuration complicated by mastoiditis. A fistulous communication with the middle cranial fossa had occurred, followed by an epidural abscess, abscess of the temporo-sphenoidal lobe, and a localised purulent meningitis.

4. Three fatal cases of "Otitic Brain Disease" are reported by J. E. Spalding, M.D., Brooklyn, New York.

5. The first portion of a paper on "The Central Acoustic Tract and its Involvement by Tumours of the Mid Brain, especially of the Corpora Quadrigemina and the Tegmentum," by Prof. F. Siebenmann, Bâle. In this section of the essay is the introduction; the topographical anatomy of the mid brain; embryology, comparative anatomy and experimental physiology of the quadrigeminal area; and a statistical contribution to the pathology and symptomatology of tumours of the quadrigeminal region in general (fifty-eight cases).

6. An interesting case—viz., one of "Chloroma of both Temporal Bones of both Lateral Sinuses and of both Orbits, simulating an Otitic Phlebitis of the Cavernous Sinus"—is reported by Prof. Körner, Rostock. The occurrence of a chloroma of the temporal bone is not mentioned in otological literature, and this case shows that the symptoms resulting from an otitic phlebitis of the cavernous sinus may be caused by another intracranial lesion. The autopsy showed absence of phlebitis of any sinus, and both lateral sinuses in their course along the temporal bone were completely occluded by greenish tumours originating in the sinus-wall. Similar tumours starting from the base of the skull had invaded the temporal bones. The sphenoid was also perforated with tumour masses. In the posterior parts of both orbits and in the temporal muscle tumours were found as large as a hazel-nut, all being of the nature of chloroma.

7. Prof. Körner also reports under heading of "Respiratory Closure of the Exposed Lateral Sinus and Air-Embolism," phenomena which he observed during the process of exposing and cleaning out a mastoid abscess.

8. A case of "Otitic Brain-Abscess in the Occipital Lobe" is reported by Dr. J. Morf, Wintertheir.

Books, Pamphlets, &c., Received.

Peritypblitis and its Varieties: their Pathology, Clinical Manifestations, and Treatment, by Frederick Treves, F.R.C.S. London: Macmillan & Co. 1897. (2s. 6d.)

The Practitioner's Handbook of Treatment on the Principles of Therapeutics, by the late J. Milner Fothergill, M.D. Fourth Edition. William Murrell, M.D. London: Macmillan & Co. 1897. (15s. net.)

A Manual of Hygiene for Students and Nurses, Illustrated by Seventy Drawings, by John Glaister, M.D., D.P.H. London: The Scientific Press, Limited. 1897.

John Hunter: Man of Science and Surgeon (1728-1793), by Stephen Paget, with Introduction by Sir James Paget. London: T. Fisher Unwin. 1897. (3s. 6d.)

An Epitome of the History of Medicine, by Roswell Park, A.M., M.D. Illustrated with Portraits and other Engravings. Philadelphia: The F. A. Davis Co. 1897. (2 dols. net.)

Anatomy, Descriptive and Surgical, by Henry Gray, F.R.S. With Drawings by H. V. Carter, M.D. Fourteenth Edition. Edited by T. Pickering Pick. London: Longmans, Geeen & Co. 1897. (36s. net.)

Manual of Gynecology, by D. Berry Hart, M.D., and A. H. Freeland Barbour, M.D. Fifth Edition. Edinburgh and London: W. & A. K. Johnston. 1897.

Reference Book of Practical Therapeutics, by Various Authors. Edited by Frank P. Foster, M.D., editor of *The New York Medical Journal*, &c. In Two Volumes. London: Smith, Elder & Co. 1897.

Heart Disease: with Special Reference to Prognosis and Treatment, by Sir William H. Broadbent, Bart., M.D., and John F. H. Broadbent, M.D. London: Baillière, Tindall & Cox. 1897. (10s. 6d.)

The Guide to South Africa (1897-98 Edition). London: Sampson, Low, Marston & Co., Limited. 1897. (2s. 6d.)

A Handbook of Midwifery, by W. R. Dakin, M.D. With Four Hundred Illustrations. London: Longmans, Green & Co. 1897. (18s.)

Air, Food, and Exercises: an Essay on the Predisposing Cause of Diseases, by A. Rabagliati, M.D. London: Baillière, Tindall & Cox. (5s. net.)

A Handbook of Therapeutics, by Sydney Ringer, M.D., and Harrington Sainsbury, M.D. Thirteenth Edition. London: H. K. Lewis. 1897. (16s.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 23RD OCTOBER, 1897.

	Week ending			
	Oct. 2.	Oct. 9.	Oct. 16.	Oct. 23.
Mean temperature,	53·2°	48·8°	45·9°	50·7°
Mean range of temperature between day and night,	14·8°	17·3°	15·1°	12·2°
Number of days on which rain fell,	5	4	4	4
Amount of rainfall, ins.	0·38	0·26	1·31	0·29
Deaths registered,	255	288	267	300
Death-rates,	18·5	20·9	19·4	21·8
Zymotic death-rates,	2·4	2·8	2·4	3·4
Pulmonary death-rates,	6·6	6·5	6·6	7·4
Deaths—				
Under 1 year,	77	78	67	89
60 years and upwards,	45	55	29	41
Deaths from—				
Small-pox,	...	...	...	...
Measles,	2	2	5	5
Scarlet fever,	2	5	4	3
Diphtheria,	1	2	3	3
Whooping-cough,	9	7	13	17
Fever,	5	7	...	10
Diarrhœa,	14	15	8	9
Croup and laryngitis,	4	2	1	1
Bronchitis, pneumonia, and pleurisy,	69	74	70	82
Cases reported—				
Small-pox,	2	1	...	2
Diphtheria and membranous croup,	2	8	9	7
Erysipelas,	28	20	12	29
Scarlet fever,	80	79	105	124
Typhus fever,	2	2	5	3
Enteric fever,	29	24	23	21
Continued fever,	...	...	...	...
Puerperal fever,	2	2	...	...
Measles,*	34	77	66	83

* Measles is not notifiable.

SANITARY DEPARTMENT,
GLASGOW, *30th October, 1897.*

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ORIGINAL ARTICLES.

HYSTERIA AS A PSYCHOSIS.[1]

By DONALD FRASER, M.D., Paisley.

I have been induced to take as the subject of my address, "Hysteria as a Psychosis," from having under my care or observation several cases of typical hysteria, the consideration of which has interested me in the very important and suggestive work of Janet, Binet, and others in the psychology of hysteria; and, in view of the varied nature of the disorder and the extent of its literature, I can only discuss in the limitations of this address, in a limited and general way, this aspect of hysteria.

I deal, then, chiefly with the typical hysteria revealed to us so fully and clearly in the many important works published, chiefly in France, during the past ten years or so. We are all familiar with the, in every way notable, work of Charcot and his disciples in the investigation of this disease of many phases and infinitely varied symptoms, we might almost say in the creation of some of its more strange forms. I remember many years ago visiting the Salpêtrière, and being shown cases where all sorts of queer manifestations had been, as I thought, manufactured, or rather developed, out of simpler elements by a more or less prolonged course of conscious or unconscious education of the subjects. I then, and for long afterwards, thought that these cases were a special product of the French soil, and if found at all amongst our more prosaic and practical people, would be of a simpler and, if I dare say it, honester type. As if to prove that this view may be still correct, we had the recent exposure of the credulity of a late distinguished physician to the Salpêtrière, and of the mendacity, the impositions, and wilful misrepresentations of the subjects of his experiments. We know, however, that Charcot and many other careful observers were quite alive to the care necessary in estimating the value of their experiments and observations on the hysterical. We still believe, notwithstanding the opinion of Gillés de la Tourette that hysteria is not more common in France than in Germany or England, that, dependent as its occurrence appears largely to be upon emotional and moral conditions, the cities of France are likely to supply more cases than those of Great Britain; that the populations which gave us the horrors of the French Revolution, and in our own time the excesses of the Commune, are likely to give us abundantly the physiological excesses of the "grand neurosis." But though this may be true, I think Gillés de la Tourette is essentially correct when he says that it is a disease of all countries and climates, and is common in England.

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[1] Presidential Address delivered to the Glasgow Pathological and Clinical Society on 11th October, 1897.

I have come to believe that we do not see many cases of the typical, and I may say developed, forms of the disease because we do not look for them, and that their prominence in France is marked because of the attention bestowed on the investigation of the affection by many eminent physicians, even granting the over-development and greater number of their cases. You will observe that in thus speaking I do not refer to the commoner forms of the affection which we call hysterical, cases with which we are all, whether practising medicine or surgery, very familiar. There are the conscious simulators of disease who apparently wilfully cultivate such sensory and motor disturbances as may be required for their purposes, until they become moral, if not physical, wrecks. Such cases are very near to those who deliberately induce disease, as in the case of a patient of mine who, in her craving for attention and sympathy, produced again and again a bad stomatitis by means of mercury. More generally, however, the craving for sympathy and attention on the part of the hysterical of this kind raises what may be a very real, though unimportant, joint, visceral, or other bodily disturbance into vivid representations which find expression, it may be, in sudden or apparently severe illness, as in a case recently under my care, where pseudo-paraplegia appeared, but was quickly cured by the help of a good nurse and some judicious neglect of the symptoms. In such cases, however, it is to be observed, there is consciousness of the conditions, and the personality of the patient is thoroughly interested and engaged in the various morbid conditions which come and go under the influence of her desires, of her mental associations, or of influences from without. In the pages of Dr. Weir Mitchell's *Nervous Diseases Chiefly Affecting Women* are to be found numerous and striking cases illustrative of this kind of hysteria—some of them sad examples of deceit; many of them cured by firm and judicious moral treatment; others saved from physical and moral wreckage by the treatment introduced and known by the name of this well-known physician. When cured, many of his patients confessed to their deceit. He gives one case where, while confessing to a process of deceit, the patient concluded with a statement to the effect that she appeared to be in a dream all the time. The author does not exempt this penitent from the condemnation applied to the others, yet this *dream-like* condition shows that, however she may have entered the path, she had soon passed into the mental condition of what we may call here for distinction's sake true hysteria, and had parted company with the great class above referred to, who consciously foster morbid conditions—possessed ones, if not by the devil by a spirit of cussedness, who unfortunately provoke distrust or aversion on our part. To this class, as to a clinical refuse heap, we have contemptuously added all sorts of cases on the borderland of fraud, hysteria, or insanity, aye, and many of the kind who in ignorance have been evilly treated—burnt in days not so long ago, and but yesterday scorned or wounded by imputations of moral impurity. They might say with the Jew, "For sufferance is the badge of all our tribe." Too often we are tempted to treat all with this badge of hysteria as a distinguished surgeon once told me he did when he was at one time much troubled by being called to women who had taken fits in the streets. He not only cured the fits, but he prevented recurrences by a vigorous hydropathy in the shape of sousing them with a bucket of cold water. As if to show the correctness of the treatment, some of his cases being again affected, his appearance was enough to stop the fit. It should be observed that this treatment might be equally effective with hysterical fits whose production was beyond the volition of the patient, and that its general use would cause us to overlook not only points of physiological interest, but considerations of great importance to the patient.

It would appear, then, that an immense parasitic overgrowth has for long concealed the true outlines of this psychosis. It is necessary to distinguish it from the vapourings of the fine lady, the conscious and purposive deceits of the male or female of weak or ill-balanced mind, from the allied conditions of neurasthenia and from some forms of insanity. It requires also to be distinguished from quite another class. Buzzard, in his interesting and suggestive memoir on "The Simulation of Hysteria by Organic Disease," speaking of disseminated sclerosis says, "it appears to me reasonable to conclude that many symptoms which have come to be considered characteristic of hysteria shrink in proportion as the various forms of organic disease acquire greater solidity and sharper definition." I have referred incidentally to its relations to neurasthenia, and that confusion prevails in regard to this relationship is made clear when we find that Dr. Donkin, in his article on "Hysteria" in the *Dictionary of Psychological Medicine*, speaks of the subjects of the less specialised forms of hysteria being styled simply "neurasthenics." This appears to mean that a vague condition of general nervous exhaustion and defective nutrition, which may have relations with all forms of nervous disease, is regarded as the foundation or the basis of hysteria, which may have few, if any, of the physical conditions which characterise neurasthenia.

I must necessarily pass over all the interesting history of medical opinion as to the nature of hysteria which has marked its transition from its conception as a physical (generally uterine) disease to the modern view of it as a mental one, affecting both males and females, though chiefly the latter, because of their fuller affective life. It is not even a disease in the ordinary sense. Sollier has said "there is not a hysterical disease; it is the cerebral mechanism which is hysterical." The definition of Charcot and Marie, in their article on "Hysteria" in the *Dictionary of Psychological Medicine*, is, "According to our notion it is less a disease, in the ordinary sense of the word, than a peculiarly constituted mode of feeling and reaction. We do not know anything about its nature, nor about any lesion producing it; we know it only through its manifestations, and are therefore only able to characterise it by its symptoms, for the more hysteria is subjective the more it is necessary to make it objective in order to recognise it." While this definition marks a great advance, it is wide enough and vague enough to be somewhat discouraging, considering its source. It makes hysteria merely a mode of feeling, essentially an emotional affection, which, to a large extent, it no doubt is; and we know enough of the physiological psychology of the emotions, not to say of our own feelings, to know that they are accompanied by, or rather are compounded of, physical states; that sensori-motor, vaso-motor, and visceral changes are essential to the existence of the emotions as we know them. As Professor James says—"The bodily changes follow directly the perception of the exciting fact, and our feeling of the same changes as they occur in the emotion," or, as he puts it somewhat forcibly, "get rid of tears, sighs, sobs, suffocation, anguish—what will remain? A purely intellectual state—pale, colourless, cold. A disembodied emotion is a non-existent one." Bearing this in mind, even if we do not accept it absolutely, we have no difficulty in understanding why hysteria, springing from the emotional side of our mental nature, should manifest itself by its varied and often puzzling bodily symptoms, though to rest here would be in the highest degree unsatisfactory, and would presume forgetfulness on our part of the temporary character of emotional disturbance as opposed to the persistence of hysterical conditions on the one hand, and of some of the more striking phenomena of hysteria on the other. It is to the labours of Charcot and his pupils in the Salpêtrière and elsewhere that we owe the striking and suggestive advances made within the last decade or so. Charcot's definition, as given above, must be read in the light of his careful and masterly clinical investigations of the objective facts of hysteria and of hypnoid conditions. F. W. Myers has said that the essential character of hysteria "is an unreasonable auto-suggestion in the regions of the mind which are beyond the powers of the waking will; hysteria is a disease of the hypnoid stratum," and the *rôle* of the fixed idea, which is but the unreasonable auto-suggestion of Myers, in the production and maintenance of hysterical conditions has been made very plain to us by Charcot's labours.

The key to the peculiar psychological conditions—the physiological are still beyond our ken—which enables the fixed ideas or persistent emotional states to develop bodily and mental effects outside the desires, the will, or even the knowledge of the patients in true hysteria, is to be found in the study of somnambulism with its strange phenomena of amnesia, its two conditions of separate psychological existences. According to Prof. P. Janet, "the most simple somnambulism must be considered as identical with those great phenomena of double existence which are always the result of a dividing in two of the personality." Medical literature has of late years made us familiar with those strange and exceptional cases where the alterations of personality have been of a striking and occasionally almost romantic character, and where they have lasted for long periods, sometimes even years. Such cases will occur to you as that of Félida X., described by Dr. Azam, of Bordeaux, or Léonie B., by Prof. P. Janet. Those interested in this subject will find it fully discussed in the recently published translation of Prof. Binet's *Alterations of Personality.*

For our purpose here it is not necessary that we accept all the statements or the phraseology of Binet, which is at times as though an actual second personality were present. We can scarcely, however, avoid accepting his conclusions, which he sums up in three propositions, and which appear to be quite established by the facts adduced by him, and, so far as we can see, are supported by the suggestive and lucid clinical studies of Prof. P. Janet. These propositions are:—"(1) Elements that enter normally into the constitution of the ego may fall into a state of disaggregation; (2) a consciousness never ceases to accompany these elements although the ego loses consciousness of it; (3) sometimes under exceptional conditions, pathological or experimental, these elements are organised into secondary personalities." You will observe that there is no room here for the old familiar phrase—*unconscious cerebration.*

It is with the first of these propositions that we are concerned in hysteria, and it is to this disaggregation of the consciousness that many of its more striking phenomena are due. It is the condition which permits the memories lost to the ego, though still subsisting in the subliminal consciousness, to assert themselves in bodily manifestations. An important factor in the production of this disaggregation is the fixed idea as already referred to, and what often gives this fixed idea its power and permanency is its dependence on shock or other similar powerful mental disturbance; and the memory, on which personality is largely based, is what is essentially affected in the production of the disaggregation, be it great or small. It is therefore important to discuss, however briefly, hysterical amnesia. I have little doubt that many of us have met with cases of amnesia of this character, though we may not have recognised them as hysterical or somnambulistic amnesias. I formerly referred to a localised amnesia from shock in a case of an elderly man whose favourite son, a young lad, was killed in a pit accident. The news was suddenly conveyed to the father, and the result of the shock, coupled with the effects of alcoholism, produced a very complete localised amnesia. He remembered nothing of the accident to his son, or of the incidents connected with it. He remembered only that his boy had left home on the Friday preceding the accident, and had not returned. He answered questions bearing on his health or on matters occurring around him in an apathetic way, but always interrupted with—"I want my boy; he left on Friday, and has never come home." After a day or two his ego grasped vaguely a little more, for he would say—"I want out to kill the man who took away my boy," the man with whom his boy worked. Suddenly in another day or so the patient seemed to wake out of this condition, with the memory of the events connected with the death of his son fully restored.

I have now under treatment a young man, an oiler in a thread factory, who, on the 30th September, went to his work at 5·30 A.M. About an hour afterwards a female worker heard an unusual vibration in the direction of the pulleys over which two driving ropes passed from an upper floor to work the machinery of the flat. These pulleys were grooved discs of metal running between two strong diagonal beams, placed about 7 feet above the floor, and closed in by a wooden box. She found this man sitting on the floor of the box, leaning against the beam, his head only near the revolving pulley and his jacket badly torn. She says she was struck with his peculiar look and his widely dilated eyes. She called to him to throw himself down; this he did, and very soon recovered sufficiently to walk home, and from there was taken to the infirmary, where he walked up the stairs to a ward. Both at home and in the infirmary he was able to answer questions correctly, though in an apathetic way, but could give no account of how the accident had occurred, and, indeed, was found to have completely forgotten all that had occurred after entering the works until the evening of the day he had been taken to the infirmary.

It is supposed that, while oiling the bearings of the pulleys, his jacket was caught by the driving rope, and that he was dragged aginst the beam until his jacket gave way, while, but for the resistance of the beam, he would have been drawn in and killed. Beyond the bruising caused by the strain and twisting of his jacket he was not hurt, with the exception of a slight bruise over the left mastoid bone, probably caused by the side of the pulley as he sat, but of too slight a kind to indicate that there had been any cerebral disturbance of a physical kind. Now, several weeks after the accident, this localised amnesia is as complete as ever. He is, undoubtedly, suffering from traumatic hysteria. The shock of his awful situation produced cortical physiological changes, of which we know nothing, but which were psychologically a disaggregation of the perceptions, the images of the period in question, from his ego. He was apparently in a condition allied to, if not the same as, that of induced somnambulism, from the time he was discovered at 6·30 A.M. till the evening of that day when he asked where he was. That the memories of the period in question are in his subliminal consciousness I have no doubt whatever. I have called this state traumatic hysteria, as I believe with Charcot, that "the pretended traumatic neurosis does not exist as a morbid entity," or, as he also says, "the symptoms developed in consequence of traumatism belong either to hysteria or neurasthenia." This brings us to a subject of much practical interest—the "railway spine," or the "railway brain," as, in view of considerations such as the above, it has come of late to be more correctly termed. Unfortunately, the scope of this address will not permit me to draw either upon my own experiences or those set forth in such well-known works as those of Erichsen or Page in illustration of the hysterical character of many a puzzling "railway case," where, in earlier days, we were inclined to look doubtfully on the reality of symptoms which were as real as the amnesia of the two cases above referred to.

Very interesting studies have been made by Janet[1] on a form of hysterical amnesia which he terms "continued amnesia." He details and analyses the famous and somewhat extraordinary case of Madame D., who had been for some time a patient of M. Charcot's in the Salpêtrière. This was a respectable woman of nervous temperament, though in good health, the wife of a workman in a provincial town, who, while one day sitting at her sewing machine, was interrupted by the entrance of a man she did not know, who said, "Madame D., prepare a bed; they are going to bring you your husband, who is dead." This cruel statement, for there was no truth in it, was repeated. The shock brought on an unusually prolonged convulsive fit, or series of fits, lasting several hours; the intervals marked by delirium and hallucinations relating to the incident or its immediate effects. It was found after the fits had passed off that her memory was completely lost, not only for the period since the accident, but for everything which had occurred in her experience for about a month before it. Her memory for all her past life up till this period was quite good. She was quite incapable of remembering anything new. She was, for instance, bitten by a supposed mad dog, had the wound painfully cauterised, and was afterwards taken to the Pasteur Institute in Paris. The bite, the cauterisation, the journey to Paris, the inoculation, were forgotten immediately after they occurred. She was taken to the Salpêtrière, but did not remember even for a minute or so where she had been, or that she had seen M. Charcot. Thus, events the most striking or painful, equally with the ordinary trivial or usual incidents of daily life, passed over her mind, apparently without leaving a trace behind. This profound and extensive amnesia persisted for a period of about nine months, though by and bye she learned so to appreciate her condition that she kept a note-book to guide her in her movements, &c. Thus she wrote—"I am at Paris, at the Salpêtrière; I saw M. Charcot this morning." "To go from the doctor's room to hall, go quite straight, enter at the first door to the left," &c., and in order to accomplish such a journey she had to read the directions while she walked. For the intensely interesting story of the discovery that this poor woman's memories existed all the time in her consciousness, though her personality, if we may so call it, was ignorant of them, and of how her cure was effected, I must refer you to Janet's article. I can only here indicate in a few sentences the further history and treatment of the case.

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[1] M. P. Janet, "L'Amnésie Continué," *Revue Générale*, 30th March, 1893.

It was observed after some time that she spoke in her sleep such words as "Oh! the ugly yellow dog; he has bitten me," "M. Pasteur," "M. Charcot," "to the Salpêtrière," &c., which showed clearly enough the existence of at least certain memories; as did also such incidents as exhibitions of great aversion and dread on seeing a dog without her being able to tell why, though before being bitten she had no such feelings of aversion. Her resigned and well-regulated behaviour in the hospital showed that subconscious memories sufficient to guide her were at work. In view of all this she was hypnotised. In this somnambulism the patient remained inert, laid on a chair, her eyes shut, only moaning and speaking when ardently challenged. But when she began to speak, she replied to all the questions, related all the events which happened since the 14th July (the date of the shock), &c., &c. But waken the patient, she knows no more where she is, and consults her note-book in order to be able to enter the hall again. M. Janet proceeds to show that the memories exist in the waking condition. He suggests to Madame D. during somnambulism that she is to leave her ward next morning at half-past ten, to cross the courts, and join him in the parlour. Next morning at half-past ten she got up abruptly, attempted to leave the ward, but was stopped by the nurses, who, as she could give no explanation of what she wanted to do, prevented her leaving. The experiment was repeated, the nurses being warned, and the order duly and successfully carried out by Madame D. without consulting her note-book. Further experiments to show the existence of memory in the waking state were successfully made by means of automatic writing, and even when she was powerfully distracted the experiment occasionally succeeded of asking her in a low tone a question, such as the name of a fellow patient, and of getting a correct reply. As might be expected from what has gone before, this strange condition was found to be dependent on a fixed idea—a persistent hallucination, though not consciously present to the patient, of the entrance of the stranger with his command to prepare a bed, &c. Janet laboured to modify by suggestion, while the patient was in the hypnotic state, this hallucination, and ultimately succeeded in substituting himself for the stranger, and the phrase, "Prepare a bed, as I wish to sleep at your house at C." for the phrase which had for her such terrible and distracting associations. A gradual cure was effected, and very curiously it is recorded that "the return of memory, the operation, whatever it was, by which the personality re-entered into those memories so long forgotten, was accompanied by violent pains in the head. I have seen Madame D. cry with pain, feel giddy, so as not to be able to stand up, and even to be delirious when she became possessed of an important group of memories, symptoms which became less and disappeared when the memories were definitely acquired."

I have quoted this case so fully, not only because of its interest, but because of the light it throws on the *rôle* of the fixed idea in hysteria. It prepares us for the views of Breuer and Freud, who, in a paper on the psychological mechanism of hysterical phenomena, corroborate the views of Janet. They consider hysteria as starting always from a shock, and as a disease of the memory, and they hold that the reminiscences of the shock in the subliminal consciousness are to be discovered and treated by hypnotism. According to Janet, the reminiscences or ideas referred to "have become subliminal or buried and forgotten.

and persist in a kind of parasitic state," and, indeed, have other painful states added to them. Now, just as the germ of the divided personality is to be found in the normal life in states of distraction, so may we find the germ of the painful subconscious feeling in normal life. Personally, I am familiar with a feeling of mental uneasiness or pain of a vague kind which follows soon after, it may be, some injury to the feelings which has been for the time being forgotten. I have felt this mental pain troubling me when engrossed in work, and have had at times some trouble to find in my memory the incident which caused it. In the light of what has been said above, this "thorn in the spirit" was for the time being in my subconscious area, and, but for my ability to get hold of it, might probably have caused hysterical symptoms.

The existence of shock or painful memories as a cause of hysteria I have been able to verify in several of the cases I have recently had under observation. This was marked in the following case of hystero-epilepsy in a male:—

A well-dressed healthy-looking lad of about 18 was sent to me in November, 1896, by his employer, who wished to know if it were safe to continue to employ him beside machinery in motion, as, while at his work a few days before, he had taken what was described as a severe and prolonged epileptic fit, and so it even appeared to me from the description given of it. His usual medical attendant asked me to see him a week or two later, informing me that he had been taking fits, lasting several hours, which appeared to have affected his mind, as he was morose and stupid-looking, and threatening violence to some of his relations, so that the question of sending him to an asylum was raised. I was further informed that his illness dated from the previous 17th August, when he fell against a piece of furniture and injured his head. When I saw him at this time he looked like a patient in a post-epileptic condition. On inquiry as to the circumstances of the fall, which he gave as the cause of his illness, I learned that he fell because he was sick, and that he was sick because he had taken a pint of beer, half a glass of port wine, and a gill of whisky. He stated that he had never tasted drink before, and the explanation given for this unusual and reckless action was that he was suffering emotionally from an imputation of the theft of a few shillings made against him by a relative. He was very reticent about this last incident, and, so far as he could be got to refer to it, he looked upon it as the cause of his drinking, not of his fits. Struck by this history, I advised his coming into the infirmary so that we might be able to determine the nature of his fits. He was admitted on the 9th December, 1896, and remained under observation for two months. At 2 A.M. on the day after admission he had a fit marked by violent contractions of almost all the muscles of the body, opisthotonus and pleurosthotonus being well-marked, and the cruciform attitude frequently taken. When his head was touched he attempted to bite, and the left side of his body seemed to be more convulsed than the right. On one occasion I was sent for, and found him in a fit which had been going on for some time. He was rolling about on the floor. He had violent muscular contractions and movements, twitching of muscles of face and fingers with, at times, rigidity of various muscles. This attack lasted two hours, and after watching him for some little time I peremptorily ordered and assisted him forcibly into a chair, put a pencil in his hand and a sheet of paper before him, and ordered him to write answers to my questions. He sat controlling his movements with obvious effort, and wrote, with eyes shut, lips closed, and muscles of face and mouth twitching constantly. To the question, "What is the matter with you?" he wrote—"My head and my chest is like to burst." "What caused this?" "I fell against the dresser one night." "There is something more than that; what is the true cause?" "I took some drink." "But there is still something more; what is it?" "At the fair I was blamed for stealing nine shillings." "Did you take it?" "I have never touched a penny of it." "Who blamed you?" "John; he either forgot or else had lost it at the races. He put it on to me on Wednesday. It has been the cause of my trouble." This was written with effort, and, as it were, under compulsion, and in a fairly good hand for a person with his eyes firmly shut. After he came out of the fit he stammered in his speech, and was slightly dazed in appearance. His fits were always preceded by, he said, intense headache, heavy breathing, a feeling of oppression in his chest, twitching of left side of jaw and fingers of left hand. He states that during the fit he is usually unconscious but sometimes he hears. He was easily hypnotised, and readily put into a cataleptic condition, and found very amenable to suggestion. I did not regard it as a proper thing in his interest to make special experiments or observations while he was in the hypnotic state, and wished only to use hypnotism for treatment. I finally hypnotised him, and suggested to him that he was to have no more fits, and in a day or two thereafter he was dismissed from the infirmary. For some weeks after admission he suffered from hyperæsthesia of hearing, and, in order to escape from the noises of the street traffic, used to take long walks into the country. He also suffered from attacks of amnesia—forgot to-day what had happened yesterday. He steadily, however, improved, and now, for eight months has had no fit, and is in regular employment.

In using hypnotism I have always done so with great care, fully recognising the danger of the process, for I have always held the views of the Salpêtrière school, rather than those of Nancy, which, as you are aware, consider it essentially as a mode of suggestion. I may say I have never forgotten in this matter the teaching of my master in medicine, Gairdner—valuable to-day as it was thirty years ago—that in using hypnotism we should remember that the province of the physician is to cure, not to cause, disease.

In this lad, a shameful charge of mean theft, not acknowledged except in the hypnoid state and under the influence of suggestion, acted as an irritant in his subliminal consciousness.

While I was interested in these inquiries, there was admitted to the Paisley Infirmary, on 9th September last, a quiet, nice-looking, respectable married woman, the mother of four children, whose husband had been removed a few months before to an asylum, but only after she had suffered much worry, and had been put in great fear of his doing serious injury to her. She entered the infirmary for obscure abdominal pains and debility. She was found to be suffering from slight cystitis, and an irritable and prolapsed right ovary. Pressure over the left ovarian region and under the left breast caused her pain; this induced me to test her sensations, when I found her analgesic over the whole left side. The temperature sense was also gone, and touch was materially impaired, sometimes absent. This anæsthesia was found at times to be distributed in a patchy way over both sides, though it was generally marked and persistent on the left side. The finger passed into the mouth only elicited the usual reflex when pushed beyond the soft palate. The knee-jerks were exaggerated, and the plantar reflex diminished or absent. There was distinct retraction of the field of vision on the left side, right round the periphery, for both objects and colours. The field for colours was extremely circumscribed. There was a history of what she termed weak turns, but whether they were hysterical, or the result of her anæmic condition, was difficult to determine. I was satisfied, in this poor woman's case, to seek only to ascertain the conditions above referred to without attempting to prosecute further investigations by means, say, of hypnotism. It was evident that we had here all the hysteria-provoking elements of severe moral strains in her life before admission, and, lacking therapeutical indications for hypnotism, though they may yet arise, I thought it best to send her out improved in general health, leaving her anæsthesia, &c., unimproved. I may note, however, that on one occasion, while her attention was distracted, though imperfectly, I moved the left anæsthetic forearm up and down for a few times, and when I stopped very distinct subconscious repetitions of the movements went on, which showed me that, under more perfect conditions of distraction, or in induced somnambulism, the mental dissociation at the bottom of her condition could have been easily demonstrated. In such a case as this, marked by the stigmata rather than by the "accidents" of hysteria, Janet would hold that the division or doubling of the consciousness does not sufficiently explain the anæsthesia, which he attributes to a "narrowing of the field of consciousness."

A few weeks ago, a man, aged 40, married, a foreman in a large factory, called on me complaining of "weak turns or spasms," accompanied by rapid breathing, which came on him at all times, and often at his work, lasted a few minutes, leaving him weak, and with a feeling of stiffness in his limbs. He had been twenty-seven years in his present employment, and always had good health until February, 1896, when he took the first of his attacks. He was at that time off work for three months, and took an attack about every ten days during that period, though since then he has been as long as three months without one. At present they have recurred again to such an extent as to peril his continuance in his situation. When examining him I was struck with a quite distinct tendency to muscular rigidity, suggestive of catalepsy in the parts handled. After feeling his pulse the arm remained semiflexed. In examining his legs, he would keep them in a constrained position until I drew his attention to them. On putting a pencil in his hand, and guiding his hand so that he might write while his attention was distracted, I found the hand becoming rigid and resisting, instead of soft and pliant, as it would have been were his consciousness normal. He took an attack in my presence. His eyes closed, his breathing became very rapid and shallow, he twitched and shook all over, and could with difficulty maintain a sitting posture. At the outside I took hold of his right arm in order to feel his pulse, which was rapid, but not specially affected, when the arm became rigid, and he cried out with the pain of its tonic spasm, and when I let it go it remained rigid and semiflexed as in catalepsy. His was then a well-marked hysterical fit, its accompaniments showing it to be a veritable disease of the "hypnoid stratum." As to a moral cause of the kind above referred to, with some trouble I ascertained that, after a period of months of special worry and strain, which brought on sleeplessness, a few weeks before his first attack he was accused of a special fault not really due to him, but over which there was some angry controversy, and he was in the act of making a special report bearing on his work and worry when the first fit came on. The influence of the fixed idea, or of painful reminiscences, not consciously thought about prior to its onset, would precipitate an attack. An example occurred in my presence, while his attention was taken up by me, and in one instance, when on his way to his work, he was met by a friend who asked him how he was. He answered, "fine," yet within a few minutes thereafter he took an attack, brought on, I would suppose, by a train of subconscious memories suggested by the question.

At the beginning of last session I brought before the Society a young girl presenting the characters of an almost perfectly typical case of hysteria. She is a quiet, modest, somewhat simple-minded girl, apparently unemotional, contented, employing herself usefully in the wards of the Paisley Infirmary, where she has been for several months. She takes hysterical fits, often to the number of four or five in a week. She usually takes them at night, under conditions which do not favour show or attract much attention. I have seen her in a fit, and saw that the conditions and movements simulated epilepsy. She has a persistent contracture of the right hand. She is analgesic over the whole of the right side of the body, including the mucous surfaces so far as they can be reached. The finger can be pushed into the pharynx on the right side till the epiglottis is touched, and held there without exciting any reflex. There is loss of the sensation of heat and cold over the same side, though touch is not affected. Taste is lost on the right side of tongue. The knee-jerks are exaggerated into a long continued clonus, and, as is so often the case in hysteria, the plantar reflex, especially on right foot, is generally absent. There is marked contraction of the field of vision of right eye. There is a hysterogenic zone over the cervical and upper dorsal region. With the dynamometer the left hand gives fair results; the right hand can scarcely move the index. She could be easily and quickly hypnotised and put into the cataleptic state, though I have failed—because I have not tried enough—to obtain the deeper or somnambulic condition, and have therefore failed to get at the fixed idea or ideas which we would expect to find in such a case, and I can learn nothing in her history to guide me towards this discovery. In the condition of lethargy or slight hypnotism, I can easily obtain automatic movements such as Binet regards as evidence of the action of the secondary or subconscious personality. The hysterical character of the fits in this case was undoubted, having been frequently observed by myself and others competent to judge. Significant as to this somnambulic character was a report a few days ago by the ward sister that this patient had a fit the previous evening, and during it came out of bed and went below it. We can scarcely avoid the conclusion, considering the persistent character and grouping of the symptoms in such a case as this, that we are dealing with disease or disturbance of lower cerebral centres than those which synthetise elementary psychological phenomena into a "single personal consciousness." At first sight, indeed, the case might easily be mistaken for one of syringomyelia, though the disappearance of the anæsthesia at times, to reappear after a fit, and many other facts showed it to be unmistakably hysterical.

That we must have in such cases lower cerebral centres involved in other than a purely psychic way is made evident by the distinction between typical hysteria and insanity. I have had under my care a case of paranoia with marked hallucinations, where the patient, a woman, believed herself visited by spiritual visitors. She developed a very large and persistent abdominal phantom tumour, which, like a hysterical contracture, remained with her for months, night and day, disappearing only under chloroform, apparently under the influence of the fixed idea, which she freely expressed, that she was pregnant to one of those visitors. No doubt visceral conditions first suggested the idea, but this idea found muscular expression as the idea of an hysterical patient might do, with the important difference, however, that the latter would know nothing about it. The consciousness in the insane patient would be completely possessed, utterly disorganised; in the hysterical, only some of its elements would be dissociated or split off from the series which formed the personality.

As an illustration of a case where the diagnosis between hysteria and organic disease is difficult to make, I may briefly refer to the case of a single lady, æt. 40, at present under my care. She has always been a very healthy active woman, of a calm, almost stolid, temperament, who has never shown the slightest trace of hysterical symptoms of the popular kind, and who has had no strains or shocks of any special kind in her life. Three years ago she had an ordinary cold, which was followed by a feeling of warmth in the legs, the right one being most affected and about the knee. This was followed by a feeling of weight, and at times they felt so fidgety that she could scarcely sit still. I saw her after this in bed, and found analgesia and loss of temperature sensation all over right side, but most marked in the leg. Her insensibility to heat and cold was so marked that she could not feel a hot bag in bed with her right foot. Her symptoms gradually, after many weeks, subsided under hydropathic treatment, change of scene, &c. She had no recurrence of the symptoms, except once when she had a bad cold, till five months ago, when she had a difficulty in forming her words, in walking and in writing, and began to see double. The diplopia was at first thought by an experienced ophthalmologist to be due to paralysis of the external rectus of the right eye. At a second visit this view was abandoned, and the symptoms considered to be hysterical. After seeing me in July last, she spent five weeks on the Continent, working very hard all the time. She came home apparently quite well but for the evidence of slight analgesia on the right side and a tendency to recurrence of the speech difficulty. There are none of the ordinary or more usual symptoms of disseminated sclerosis, yet it is difficult to avoid the impression that here centres lower than the psychic ones are at fault, and, indeed, only time can determine whether it is a case of hysteria, disseminated sclerosis, or a post-influenzal condition.

There can be no question of the value or fruitfulness of the views as to the psychology of hysteria which I have somewhat superficially, as well as imperfectly, brought before you to-night —imperfectly, in that I have not developed Janet's idea of the "narrowing of the field of consciousness" the result of "weakness of the faculty of synthesis," the doubling of the personality being essentially due to this weakness of psychic synthesis. You will observe, too, that I have not discussed the views of Mœbius or others as to the psychology of hysteria, being, indeed, satisfied with what I regard as more satisfactory opinions, though from a physiological point of view they bring us no nearer to an exact pathology of hysteria than before. Psychologically, Janet's opinions are in harmony with, and serve to explain most of the accidents and stigmata of hysteria. They serve, too, to throw light on many obscure conditions in mental pathology generally, but they do not explain to us the mechanism of their production physically. Sollier,[1] indeed, criticises adversely Janet's views. His position is that the fundamental trouble in hysteria is physical—a state of torpor, of sleep more or less profound, which attacks the cerebral centres either alone or in mass, successively or at once, &c. He, indeed, finds himself in accord with the definition of MM. Charcot and Marie which I quoted at the outset. It does not, however, get us much further on to speak of hysteria as physical and functional, and of the nature of a torpor or sleep of cerebral centres, which is, indeed, but a definition of hypnotism. We have still to wait for the physiological explanation. Meanwhile, while we consider hysteria as a psychosis, we gratefully accept as a working hypothesis the lucid and brilliant psychological expositions of Janet.[2]

ON THE FUNCTIONS OF A MEDICAL SOCIETY.[3]

By JAMES W. ALLAN, M.B.,
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GENTLEMEN,—Permit me to thank you most sincerely for the honour you have done me in electing me as your President. It shall be my honest endeavour to fulfil the duties of the office in a worthy manner, and I congratulate myself on having the support of colleagues who are so well qualifed, by ability and experience, to promote the best interests of our Society.

Gentlemen, it is not my intention to attempt a long and learned address. But if you will bear with me a little, I shall bring before you, very briefly, one or two matters which you may perhaps think worthy of further consideration.

In the first place, I wish to ask you, and I wish you to ask yourselves, the following question—What are the functions of a society such as ours? The reply may seem easy. Our Society is not a thing of yesterday; it has a history, and it has played, and is playing, a useful part. There is no need to enquire at this time of day what its functions should be—it has been fulfilling its functions for many long years. But the question remains—Is it doing so to the best possible advantage?

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[1] *Genèse et Nature de l'Hysterie*, Paris, 1897.

[2] Pierre Janet, *État mental des hystériques; les stigmates mentaux; État mental des hystériques; les accidents mentaux* (Reuff, Paris, 1892, 1894, 2 vols.).

[3] Presidential Address delivered before the Glasgow Southern Medical Society, on 4th November, 1897.

Is it keeping abreast of the times and of similar institutions? If a man, or a society, ceases to develop or to partake of the living spirit of the age, that man, or that society, is in process of being fossilised. Now, a fossil may have a beauty, and often has an intense interest, of its own. But its place is in the cabinet of a museum, not in the active world of life and change.

Now, gentlemen, I do not mean to hint for a moment that our Society is becoming a fossil, more especially now that it has entered on an improved "environment," which we all know to have a wonderful effect in modifying the growth and development of all living things. But I think it behoves us as loyal and true members to carefully and conscientiously consider this question—What are the functions of a society such as ours? and the further question—Is it fulfilling those functions in the best possible manner? Let us review the purposes it serves at present.

1. It aims at cultivating a fraternal association of the members of the medical profession, particularly on the south side of the river. This is a good, useful, and noble aim. How many petty misunderstandings, how many miserable squabbles, how many heartburnings would be avoided if those involved in them had met face to face? How many men become enemies, and remain enemies for years, on account of some careless, or it may be jesting, remark which has been officiously carried and reported by the proverbial "candid friend?" I suppose we all know the candid friend who always feels it his *duty* to tell us everything which is likely to annoy or worry us. Now, if in such a case the men concerned had met face to face, and had an explanation, how often would enmity be converted into friendship, and anger to laughter? For very often there is really "nothing in it." But, alas, men seem to prefer a written correspondence, and when *that* begins, where will it end?

Gentlemen, in promoting the social intercourse of the members of the profession our Society is fulfilling an important function. Members must bear in mind, however, that the real fulfilment of this object lies with themselves. The Society has provided facilities for meeting, but the actual meetings depend on the members. Our zealous secretary has secured for us a pleasant habitation, and a modest provision for creature comforts. The late hour of meeting is perhaps a stumbling block with some, but that is a question which cannot be discussed at this time.

2. Our Society provides facilities for the reading of papers, demonstration of cases, and the discussion of all matters of

medical interest. Moreover, on each billet there is printed an invitation to the following effect:—" *N.B.*—The business is not strictly confined to the items on the billet. Provided time allows, any member may introduce a subject for discussion after the completion of the regular programme." This quiet little intimation seems to me to contain the germ of a plant which might prove of great practical value—*if cultivated.* There can be no doubt that every medical practitioner has a store of experiences which would be of immense value if communicated to his professional brethren. It is to be remembered that the work of our profession brings each member into close touch with Mother Nature—and she is always teaching, always giving lessons. She does not reserve her demonstrations for those who practise among the rich and the cultured classes, nor for the hospital physician. Wherever suffering humanity is to be found, there she is teaching, she is demonstrating. And so it comes about that the humblest medical practitioner may have a priceless opportunity afforded him of making a contribution to the common good. No doubt the busy general practitioner in a large city, and among the working classes, has to work hard for his daily bread. There is no "eight hours" day for him. For weeks he may be on the "night-shift" as well as the "day-shift," and he is poorly paid. Such a man may well excuse himself from the preparation and reading of scientific papers before medical societies. He is thankful for a quiet evening by his own fireside, and for a night of undisturbed sleep. But our Society invites him to give us, in an informal and conversational way, any interesting or unusual phenomena which may have presented themselves to him, and to give us any thoughts or suggestions which may have occurred to him in connection therewith; or to ask the members of the Society for explaination or aid. Let every member of the profession remember that he has the responsibility of an *observer* as well as a *practitioner,* and that he is morally bound to give the profession the results of his experience, for the benefit of suffering humanity.

In meeting with "country practitioners" I have been struck with the close observation and sound commonsense of these men. Think of their position! They have to face everything —medicine, surgery, midwifery, and *all the specialties!* Long journeys in cold and wet—desperate and unexpected cases in out of the way places—no opportunities for a "consultation" —no physical help, no moral support. Single-handed they fight the battle, showing in many cases a readiness of resource, and a courage and self-reliance which remind one of the British soldier when placed in a "tight place." And some of these men are well posted up in medical literature.

And reference to the general practitioner leads me to say a word regarding *specialists.* Let me be clearly understood. There is a *legitimate* specialism. In large centres it is a matter of great advantage to the public and the profession that certain men should devote themselves to the diagnosis and treatment of certain diseases, such as those of the eye and the throat. Those who so devote themselves acquire a dexterity in manipulation, and are provided with an *armamentarium*, which give them a great advantage and confer very decided benefits on those who are submitted to their care. And when such men have had a thorough general training in medicine and surgery, and a subsequent prolonged experience of *general practice*, their position is perfectly justifiable and legitimate. They have come to occupy their position by a process of exclusion. Beginning with a thorough practical study of the whole field of disease, they finally devote themselves to that class of disease in which they have acquired a special interest, and for the treatment of which they have developed a special aptitude. Such an one in a large centre occupies a well recognised position, and his services in difficult cases, especially those demanding operative dexterity or special instruments, are alike welcomed by the profession and the public.

But when we see young members of the profession "skipping" the absolutely essential training of the "general practitioner" (which is regarded by them as a sort of drudgery), and immediately after graduation setting up as specialists in this, that, and t'other thing, it makes one smile—sadly. A man cannot know the diseases of the eye or diseases of the throat unless he has honestly studied, observed, and treated the whole register of "the ills which flesh is heir to." Special organic diseases often have, generally have, their explanation in a constitutional affection. And so it comes about that the young graduate who forthwith sets up as a specialist may be less reliable, less helpful, than the old jog-trot family physician who knows by heart the whole gamut of human misery, and at once recognises the sign manual of disease.

This tendency to belittle the general practitioner, to regard his work as "drudgery" which should be avoided by those who can afford to do so, is a mistake. Gentlemen, some of the brightest stars of our profession have been general practitioners, and most of those who subsequently attained to high eminence in special walks commenced their careers as general practitioners. And by such men many of the most brilliant advances of medicine have been made.

I cannot resist the temptation of touching on another point connected with the tendency to differentiation of the branches of the service in our profession. The division into physician and surgeon has many conveniences, and, indeed, in a large city with a consultant class it is evidently a sort of necessity. But it is a great evil if physician and surgeon lose touch with each other in their work. After all, both are the humble servants of Mother Nature, and she does not trouble herself to give sign or warning of the line of demarcation which separates their respective fields of action. It therefore follows that if these fellow-workers do not keep in touch, the patient suffers; and that is, of all things, the thing to be avoided. Surgery has in these later days advanced by such leaps and bounds that it would be hard to put a limit to the possibilities of her triumphant advance. Cases that would a few years ago have been regarded as utterly beyond legitimate interference are now operated on, and with brilliant success. This lays a heavy responsibility on the physician and the general practitioner. Cases come under their observation and treatment which may pass on to an unnecessary fatal termination if they do not invoke the aid of their brother, the surgeon. And the point to be particularly attended to is this, we must call him in while there is a chance for him to be of service. It is no use appealing to the surgeon when the patient is *in articulo mortis;* that is a mockery and a grievous bitter error. It behoves us, then, to keep in touch with the surgeon and his work, so that we may know what he can do, and also learn to apprehend *early* the indications for calling him to our aid. It may be that false alarms will be raised occasionally; better fifty false alarms than one fatal delay. But in order to do our duty in this matter we must, as already said, keep in touch with the surgeon—hear him report his cases, take an interest in what he is doing, and rejoice with him in his triumphs.

The healing art is a complete round of the circle, encompassing and trying to obliterate, or at least narrow, the area of human misery. Our petty artificial classifications and distinctions are, after all, mere matters of convenience—aids to the division and perfection of labours in a common cause.

But, gentlemen, I am wandering far from the matter in hand—viz., our Society. To return. I have said that in promoting social intercourse between members of the profession, and in affording facilities for interchange of knowledge and experience in professional matters, our Society is doing good work. But is there no scope for development? Is it not one of the functions of a society such as ours to try to *advance* medicine, to assist, in however humble a way, to an extension of the powers of the beneficent healing art? I commend the subject to the consideration of the members of this Society. No doubt every paper which is read, and every discussion which takes place, is tending in this direction. But I would suggest that we might do something more definite. It is a good thing to aim at something, to try to work in a given line. Such efforts are more likely to give a satisfactory result than desultory efforts.

My suggestion is that our Society should take up, say, in the first place, therapeutics, or a branch of therapeutics. Let a committee be appointed to deal with the matter. There is among many members of the profession a scepticism with regard to the value of drugs. The *vis medicatrix naturæ* is regarded as the sole healer, and our attempts at treatment as but bungling efforts to help that force.

Gentlemen, the more we see of disease and of Nature's working, the more deeply are we impressed with the wonderful powers of this *vis medicatrix naturæ.* There can be no scepticism about *it.* But I do think we tend to err in the present day in under-estimating the value of drugs in *assisting* this natural healing tendency. And I think this attitude is attended with bad consequences.

We see surgery do to demonstration things which baffle the *vis medicatrix naturæ,* and so rescue suffering mortals from disease and death. Why should not medicine do the same? Nay, do we not know that in some specific diseases (such as syphilis and malarial fever) we have drugs which *do* destroy or retard the morbid processes, and so cure, or at least relieve, the sufferer?

With such facts before us, is it not evident that our attitude should be one, not of "scepticism" or apathetic "expectancy," but of eager and honest research and investigation.

When a remedy is announced, or called in question, let the members of the Society take the pains to keep a record of the results of the use of this drug in their practice, and send such records to the "committee on therapeutics," and let the committee, in turn, tabulate or otherwise reduce this mass of evidence to a form in which it may be available for publication, or, at least, for future reference and guidance.

A man may have only one or two cases in his practice in which a given drug is called for, and his very limited experience may be of little value, or even misleading. But when we come to deal with a large number of cases and a wider experience, the results obtained may possess a high value.

Gentlemen, I shall not dwell further on the subject. I submit it for your consideration.

The Society has from time to time visited institutions, such as hospitals and asylums, and these visits have proved to be interesting and instructive. There is another field which I would suggest to the Southern Medical Society—viz., the visiting of public works. It may be asked—What has that to do with the practice of medicine? My reply is—That it is intimately connected with our professional work. I suppose we all make it a point to ascertain the occupations of our patients. I make it a practice to do so. In some cases it is the key to the situation, and in most cases it throws at least some light on the etiology and nature of the case.

Gentlemen, our profession is one that brings us into close contact with all the grades and phases of human life, and the best doctor, *cæteris paribus*, is the man who knows most about humanity.

We are interested—vitally interested—in all that pertains to the great problems of human life, and if we wish to do the greatest possible good by advice, prevention, and cure, we shall endeavour to arm ourselves by learning all we can regarding the ways of our fellow-creatures. Especially does this hold good regarding the occupations of our patients. It is really part of our duty to make ourselves familiar with the nature of the labours of those who consult us with regard to their health. To be ignorant on this subject lessens our power to grasp the etiology of many cases, and deprives us of the means to advise our patients for the best. Every day we are asked by patients if they are able to resume work, and sometimes the question is whether they will ever be able for their trade again, or will require to adopt some other occupation? The importance of knowing something about the trade in question is here self-evident. And there is another aspect of this matter. It is of consequence that the doctor and the patient should be in sympathy. When a man feels that his medical adviser understands something of his daily life, that he knows the nature of the difficulties and hardships he has to contend with, he is more likely to regard that adviser as a friend, and so confide in him more fully than he would otherwise be likely to do.

If you will excuse a personal reference, I may tell you that

I have had the privilege of visiting an iron-work, a steel-work, a pottery, a distillery, a brewery, a sugar-house, a dye-work, a tannery, a spinning-shed, a chemical-work, a galvanising work, and a gas-work. I have also been down a coal pit, and more than once at sea. These visits to public works commenced in my schooldays. And you may ask—What good did all this do you? My reply is—Much good. I learned, among the side-lessons, that a wonderful skill is required in some of the trades, and that high intelligence is not confined to the professional and learned classes. And I saw the conditions under which the workers discharge their duties, and the nature of their labours, and so, when those people come before me as patients, I at least know something about their life-work, and am enabled to understand, in a degree, the explanations which they give in reply to questions.

I should advise the arranging of a series of visits to the various industries for which our city is famous, and I am sure that the visits would prove to be interesting, instructive, and useful. If the Society approves of the suggestion, the working out of the matter may safely be left in the hands of our energetic secretary, Dr. William Watson.

To turn to another point. Gentlemen, we have on the "south side" a fine hospital, in many respects a model hospital. That hospital is provided with a staff of distinguished physicians and surgeons. These gentlemen have already given our Society the benefit of demonstrations of cases of a highly interesting and important character. Gentlemen, let us, as a Society, draw closer to the Victoria Infirmary. We are much interested in its welfare. We send a representative to its Board of Directors. Let us keep in close touch with its staff and their work. There are good brains on the south side, and an extensive field.

Let our Society aid in the development of a centre of medical activity on the south side. But let this be done in a broad spirit, keeping in sympathy and good fellowship with the other centres of medical activity. There is now a large medical community on the south side of the river. Its aim should be to take a place in the march of medical progress, but not with the idea of establishing a petty autonomy. Let it march shoulder to shoulder with its neighbours, actuated by a spirit of honourable emulation and an honest desire for the common good. I think this is "a consummation devoutly to be wished."

My last proposal is that our Society should consider the propriety of publishing its transactions. Perhaps you may regard the proposal as premature. I would urge, however, that it should not be dropped out of sight.

And now, one word in conclusion. Let us remember as a Society, and as members of an honourable profession, that we should always aim at courtesy and a high sense of good faith in dealing with each other. At the same time, we should carefully guard against the development of a hyperæsthetic tenderness which renders us incapable of sustaining with equanimity the ordinary brushes and frictions of everyday life. Commonsense, honesty of purpose, and a spirit of goodwill are the best guides in professional, as in ordinary social, intercourse. It is not to be forgotten that the public will respect and have faith in the profession very much in proportion as it sees the members of the profession respecting and reposing faith in each other.

SCARLATINAL ALBUMINURIA.

BY FRED. DITTMAR, M.D.,

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THIS piece of work was suggested by Dr. R. S. Thomson's paper on "Scarlatinal Albuminuria" in vol. lxix of the *London Medico-Chirurgical Transactions*, and by the paper of the late Dr. Mahomed, entitled "The Etiology of Bright's Disease, and the Pre-albuminuric Stage," published in vol. lvii of the *Transactions* of the same Society. It represents the result of six months' continuous observations of the urines of ninety-one consecutive cases of scarlatina admitted to the wards of the City of Glasgow Fever Hospital, Kennedy Street.

The patients were of all ages, from 1⅛ to 50 years, the large majority being under 15 (84·6 per cent), and 62·6 per cent being under 10 years of age. Albumen or blood-colouring matter, or both, were detected at some period during the stay in hospital in 48 (52·7 per cent) of the cases examined, and of these 29 (60·4 per cent) were below 10, and 39 (81·2 per cent) below 15 years of age.

METHOD OF OBSERVATION.

The method adopted was as follows:—Two specimens of the urine of each patient, obtained about 6 A.M. and 6 P.M.

respectively, were examined daily for both albumen and blood-colouring matter from the day of admission till the day of dismissal. In a considerable number of the cases three daily specimens were examined, and in some four or more daily specimens were tested if it seemed called for.

In all, over ten thousand specimens of urine were examined for albumen and for hæmoglobin. In a large number, though not in all of the cases, the urinary sediment was frequently examined under the microscope. Nitric acid was used as the standard test for albumen, the urine being poured carefully on the acid along the side of the test-tube held slantingly. In cases of doubt, the heat and picric acid tests were also employed. The guaiacum test was employed for the detection of hæmoglobin.

RESULTS OF CLINICAL OBSERVATION.

Classification of the Cases.—As already stated, the proportion of cases in which some abnormal urinary constituent occurred was large, as many as 48, or 52·7 per cent of the cases examined, having been found to contain albumen or hæmoglobin, or both, at some time during the period of residence in hospital, which, as a rule, extended to fifty-six days. In most of these the quantity of albumen was small, and could be detected only by careful testing. In some cases merely an occasional trace was detected; but in others the albumen persisted in the urine for weeks, and was sometimes very considerable in amount.

In some of the cases "blood" alone seemed to be present, the albumen bearing, as far as it was possible to judge, a proportion to the hæmoglobin such as exists in normal blood.

In other cases both blood and albumen were found, the amount of albumen being out of all proportion to the hæmoglobin as it exists in normal blood.

The cases under consideration can thus be divided into three classes.

I. Cases of "albuminuria" in which albumen only was present, in variable, though, as a rule, in small amount. (*Vide* table, p. 436, Cases 1 to 36 inclusive.)

II. Cases of "hæmaturia" in which apparently "blood" was present. (*Vide* table, p. 440, Cases 37 and 38.)

III. Cases in which both albumen and blood were present, but in which the amount of albumen was greatly in excess of that ascribable to the presence of blood alone. (*Vide* table, p. 440, Cases 39 to 48 inclusive.)

The last four cases might at first sight appear to merit being placed in a class apart from the others, as there seemed to be no relation between the albumen and the hæmoglobin detected in them. The explanation may be that there was an excess of albumen present at first, and that the surplus albumen persisted after the blood had disappeared.

Microscopical examination of the sediment in the first class of cases did not always reveal the presence of tube-casts. Round granular cells were commonly found in the sediments examined.

In the second class of cases red blood corpuscles were seen under the microscope, and occasionally, what might have been, judging from its appearance, a blood-cast, or at times a hyaline cast.

In the third class of cases numerous granular, hyaline, epithelial, and blood-casts were observed mixed with red blood corpuscles and round granular cells.

PERIOD OF OCCURRENCE.

The period of the disease at which the presence of albumen or hæmoglobin or of both was noted in the cases under consideration varied greatly, and it is quite impossible to draw any general conclusions from the small number of cases recorded. There was no particular date on which albumen seemed to be particularly prone to appear, although a relatively larger number of the cases showed the presence of an abnormal constituent during the latter half of the first week, during the second week, and on the thirty-first day than at any other period of the illness. It is, however, interesting to note in this connection that acute desquamative nephritis occurred very late in the course of the disease in three cases (Nos. 40, 41, and 42 in table), the first sign of albumen in the urine in these cases having appeared on the forty-fifth, fifty-second, and forty-eighth day of illness respectively. A considerable number of the cases (twelve in all) showed albumen early in the disease, and in nine of these there was an interval of a variable number of days before albumen again made its appearance.

In the remainder of the cases albumen was not detected during the early days of the disease. The cases, therefore, appear to divide themselves naturally into two classes—(1) cases of "early" albuminuria; (2) cases of "late" albuminuria.

"Early" albuminuria is, as a rule, not of itself of serious import, and judging from its usually short course and the absence or only occasional presence of tube-casts in the sediment, one would be justified in ascribing it to a catarrhal condition of the kidney, and not to an actual inflammation of its substance. In some severe cases, however, true nephritis commenced during the early days of the illness, and ran a lengthy course without intermission, lasting many weeks in one of the cases (see table, Cases 9, 13, and 34).

The division of the cases into those of "early" and "late" albuminuria is a somewhat arbitrary one, but it seems to be justified by the observed fact that in many cases an interval of a variable number of days occurred between the attacks of albuminuria. In some mild cases the "early" albuminuria was not followed by "late" albuminuria (see table, Cases 7 and 21). The facts described above may now be more clearly understood by means of the following series of tables:—

TABLE I.—SHOWING THE INTERVAL IN DAYS BETWEEN "EARLY" AND "LATE" ALBUMINURIA.

Number of Case in Table.	Interval between "Early" and "Late" Albuminuria.	Number of Case in Table.	Interval between "Early" and "Late" Albuminuria.
2	20 (9th—29th)	27	48 (7th—55th)
5	12 (9th—21st)	29	28 (4th—32nd)
14	22 (8th—30th)	35	6 (7th—13th)
18	3 (9th—12th)	45	3 (7th—10th)
20	24 (8th—32nd)		

TABLE II.—SHOWING THE DATE AT WHICH ALBUMEN WAS FIRST DETECTED IN THE CASES WHICH DID NOT SHOW "EARLY" ALBUMINURIA, BUT INCLUDING CASES 9, 13, AND 34, IN WHICH THE "EARLY" ALBUMINURIA RAN ON WITHOUT INTERRUPTION TO "LATE" ALBUMINURIA.

Day of Illness on which Albumen first detected.	Number of Cases which first showed its presence on that Date.	Day of Illness on which Albumen first detected.	Number of Cases which first showed its presence on that Date.
4th	1	23rd	1
5th	1	25th	1
9th	3	26th	1
10th	3	27th	1
12th	2	30th	1
16th	1	31st	5
17th	1	45th	2
19th	1	48th	1
20th	2	52nd	1
21st	1	58th	2
22nd	1	67th	1

It will be seen from a reference to the preceding table that a larger number of cases occurred from the ninth to the twelfth days, and on the thirty-first day than on any other particular day of illness.

A third table may now be drawn up showing the date at which albumen was first detected in all the cases examined, irrespective of whether it came under the class of "early" or of "late" albuminuria.

TABLE III.—SHOWING THE DATES ON WHICH ALBUMEN WAS FIRST DETECTED IN ALL THE CASES EXAMINED.

Day of Illness on which Albumen first detected.	Number of Cases in which Albumen was first detected on that Day.	Day of Illness on which Albumen first detected.	Number of Cases in which Albumen was first detected on that Day.
2nd	1	21st	1
3rd	2	22nd	1
4th	2	23rd	1
5th	3	25th	1
6th	3	26th	1
7th	4	27th	1
8th	1	30th	1
9th	3	31st	5
10th	3	45th	2
12th	2	48th	1
16th	1	52nd	1
17th	1	58th	2
19th	1	67th	1
20th	2		

From this table it is seen that more of the cases showed albuminuria from third to seventh, from ninth to twelfth, and on the thirty-first day than at any other particular date in the illness.

Dropsy or œdema of superficial parts was observed only in three of the cases examined, and they all belonged to Class III (Nos. 41, 43, and 44 in table).

On the Pre-albuminuric Stage.

Dr. Mahomed first drew attention to the fact that in some cases of nephritis, notably in scarlet fever, one sometimes observes a stage in which only blood-colouring matter can be detected, not albumen. To this stage he gave the name of the "pre-albuminuric stage," and from the cases he recorded in vol. lvii of the *Medico-Chirurgical Transactions*, he drew certain conclusions. The substance of these is, that previous to the appearance of albumen in the urine there is observed a condition of high tension in the arterial system, which, if sufficiently severe, leads to transudation of the hæmoglobin *before* the appearance of albumen in the urine; that if this condition of high tension be unchecked, Bright's disease in one of its forms will result; whereas, if it is checked by a brisk purge or other "appropriate means," there is reason to believe that an attack of nephritis has been aborted. It is outside the scope of this paper to discuss any theory as to the causation of nephritis, and to that part of Dr. Mahomed's paper I shall not refer, but shall confine my criticism to his facts, alluding only to the cases of scarlatina adduced in support of his theory.

In examining the urines of scarlatinal patients systematically for both albumen and hæmoglobin, one repeatedly finds a specimen which responds to the guaiacum test, but does not show the presence of albumen by the ordinary tests. To settle whether it was justifiable to conclude from this that only hæmoglobin was present in the urine and not actual blood corpuscles, the following experiment was made, microscopic examination of the sediment not proving satisfactory, partly because the number of red blood corpuscles was small, and because those present became so altered in appearance after some hours as to be unrecognisable. A suspected urine (*i. e.*, one which gave the guaiacum reaction, but no reaction for albumen by the ordinary tests) was allowed to stand for four to six hours, when it was tested for hæmoglobin at various levels, with the result that the characteristic reaction was obtained only in a specimen taken from the lower parts of the column. After standing for some hours more, the characteristic reaction could be obtained in the upper portions of the column also. This observation was made not once, but repeatedly, and agrees *in toto* with the results of Dr. R. S. Thomson's experiments published in vol. lxix of the *London Medico-Chirurgical Transactions*; and I agree with his explanation of the phenomenon that it is due to the presence of red blood corpuscles, which, gradually settling to the bottom of the urine glass, cause the reaction to be most marked there at first; afterwards, when the hæmoglobin has dissolved out of the corpuscles and been diffused throughout the column, the reaction is obtained in the upper layers of fluid as well as in the lower. A similar, but the converse, phenomenon is sometimes observed during the decline of a nephritis, the albumen disappearing first, the hæmoglobin later; and to this stage Dr. Thomson suggested that the name of "post-albuminuric" stage might be given. In this stage, also, the urine gives similar reactions to those described above.

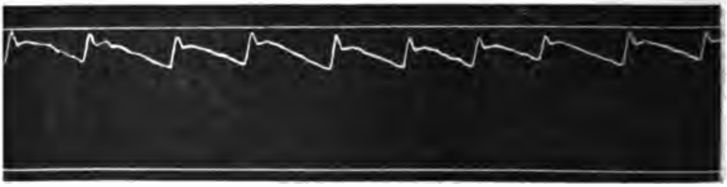
To make the proof of the presence of blood, and not merely crytalloids, in a urine of the nature in question complete, all that remained was to demonstrate the presence of albumen, and this was done as follows:—

Three to four ounces of the suspected urine were evaporated in vacuo to a small bulk, filtered, and the filtrate neutralised with carbonate of soda, and then rendered faintly acid by the addition of a few drops of dilute acetic acid. It was then boiled, and in every case the presence of albumen was demonstrated by the formation of minute flakes, or at least of a distinct haze.

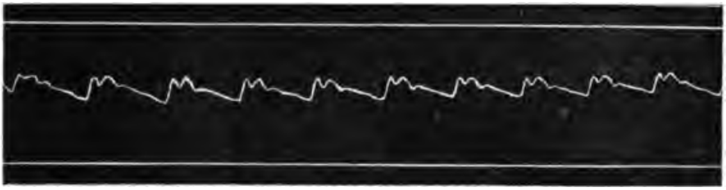
Dr. Mahomed found that a condition of constipation preceded the so-called pre-albuminuric stage in most of his cases of scarlatinal nephritis, and looking upon the extra quantity of effete material thereby thrown into the circulation as the more immediate cause of the nephritis, he treated his cases by purgation.

In some, though not in all of the cases quoted by him, there was observed after this treatment a distinct lowering of the tension in the pulse, and a disappearance of hæmoglobin from the urine. The conclusion drawn from this was that an attack of nephritis had been aborted. Judging his cases from my own, a more natural explanation would appear to be that the cases in which the so-called abortive treatment seemed to be successful were cases of transient hæmaturia, or of only very slight nephritis.

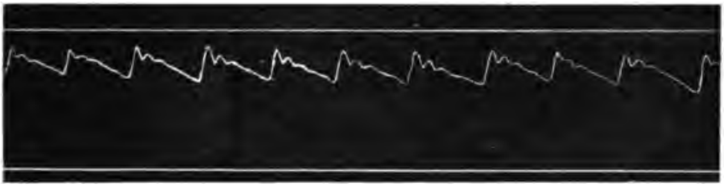
Several pulse tracings are now added, which were obtained by myself from some of the cases. Nos. 1 to 3 are from Case No. 44, a boy, æt. 6.



No. 1.



No. 2.

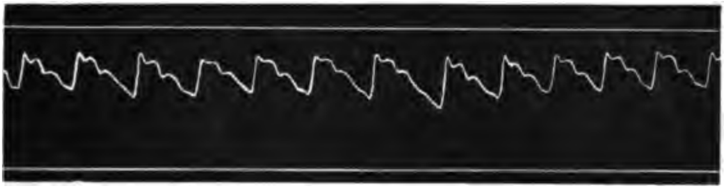


No. 3.

No. 1, taken on seventeenth day of illness, during what Dr. Mahomed' would have called the "pre-albuminuric" stage.

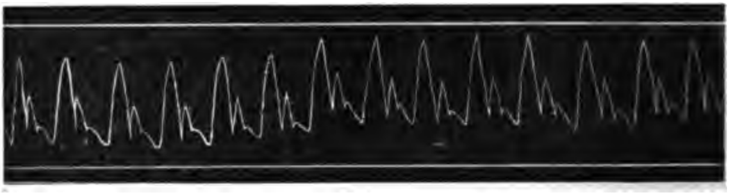
No. 2, taken on eighteenth day of illness, is more markedly one of high tension.

No. 3, taken on the ninety-sixth day of illness, shows the pulse coming back to a more normal state, though there was still slight albumen and blood present in the evening specimen of urine, and a faint trace of albumen only in the morning specimen.

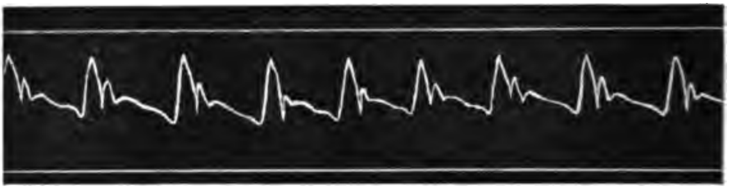


No. 4.

No. 4 is a tracing taken on the fifty-second day from Case 41, a boy, æt. 7, and shows well-marked high tension, there being both blood and albumen in the urine.

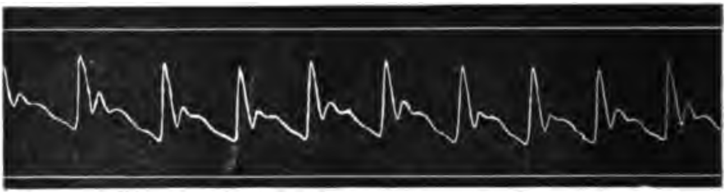


No. 5.



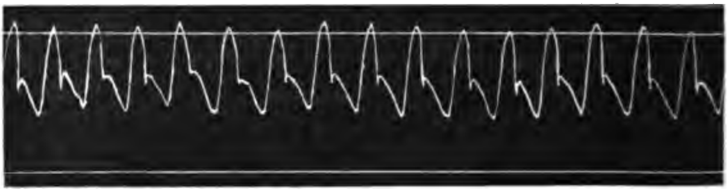
No. 6.

No. 5 is from Case No. 40, on the forty-fifth day of illness, when albumen and blood were first detected in the urine, the sediment at the same time containing numerous tube-casts. I do not think it merits the name of a pulse of "high" tension; certainly it cannot be said to be of higher tension than the next tracing (No. 6) which was taken from a brother also suffering from scarlet fever, but who had no sign of nephritis.



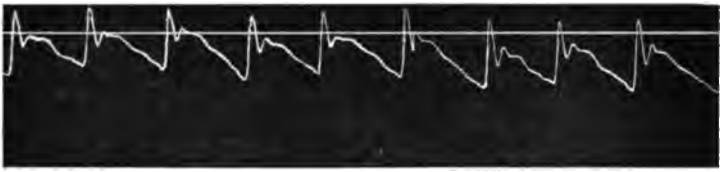
No. 7.

No. 7 is also from Case No. 40, on the one hundred and sixty-first day of illness.



No. 8.

No. 8, taken on the twenty-seventh day of illness, is from Case No. 38, and could not be called a pulse of "high" tension.



No. 9.

No. 9 is from Case No. 46, on the fifteenth day of illness, and cannot be called a pulse of "high" tension.

SUMMARY.

To make a short summary I would direct attention to the main facts brought out in this paper, which are:—

1. That albuminuria or hæmaturia, or both, occurred in 52·7 per cent of the cases observed.

2. That the cases seemed to divide themselves naturally into three classes—(*a*) Those of pure albuminuria in which albumen only was detected; (*b*) those of hæmaturia in which "blood" seemed to be present; (*c*) those of albuminuria and hæmaturia, the albumen being greatly in excess of the hæmoglobin as found in blood.

3. That dropsy or œdema of the superficial parts was observed unmistakably in only three of the cases.

4. That a "pre-albuminuric" and a "post-albuminuric" stage (if the word be allowed) do not exist in the proper sense of the terms.

5. That a pulse of "high" tension was not an invariable accompaniment even of undoubted nephritis.

No. of Case.	Date of Admission.	Age.	Sex.	Day of Illness.		Period at which Albumen was Detected.
				Adm.	Dism.	
						I.—Cases of
1	16/11/95	2½	M.	4th	88th	58th (P.M.) tr. ; 59th (A.M.) tr.
2	16/11/95	10	F.	4th	60th	7th (P.M.) r. ; 8th, 9th (A.M.) tr. ; 29th (A.M.) tr.
3	19/11/95	5	F.	15th	72nd	20th—22nd tr. ; 23rd (A.M.), 24th tr.
4	25/11/95	6½	F.	3rd	57th	31st (P.M.) dist. ; 32nd (A.M.) tr.
5	28/11/95	9	F.	4th	66th	5th, 6th tr. ; 9th (A.M.) ft. tr. ; 21st ft. tr. ; 22nd —25th (A.M.) tr. ; 27th (A.M.), 30th (A.M.), 31st tr. ; 32nd (A.M.), 47th (A.M.), 56th (A.M.), tr.
6	1/12/95	7	F.	4th	56th	20th (A.M.), 24th (A.M.) tr.
7	13/1/96	5	F.	4th	62nd	7th, 8th tr.
8	22/1/96	7	F.	4th	74th	26th (P.M.) tr. ; 27th (A.M.) tr.
9	7/11/95	11	F.	5th	112th	5th—100th abdt. to ft. tr. ; 107th—110th ft. tr. ; 111th (A.M.) ft. tr.
10	8/11/95	8	F.	2nd	59th	58th (P.M.) tr.
11	29/11/95	2	M.	4th	93rd	67th (P.M.) dist.
12	15/12/95	3	F.	2nd	61st	10th (P.M.) dist. ; 11th (P.M.) tr. ; 15th (A.M.) tr. ; 22nd (P.M.) tr.
13	17/12/95	4	M.	4th	20th	4th—18th dist. to ft. tr. ; 19th dist. ; 20th abdt.
14	23/12/95	3	F.	4th	62nd	8th (A.M.) tr. ; 30th (A.M.) tr.
15	23/12/95	1½	M.	7th	75th	9th (A.M.) tr. ; 10th, 11th (A.M.), 12th tr. ; 39th, 40th tr. ; 41st (A.M.) tr.
16	23/12/95	12	F.	9th	67th	12th (A.M.) sl. tr.
17	9/1/96	5	F.	6th	24th	12th (P.M.) ft. tr. ; 16th (P.M.) dist. ; 17th, 18th, 19th (A.M.) dist. ; 20th dist. ; 21st (A.M.) dist. ; 23rd (A.M.) tr.

ABBREVIATIONS.—Abdt. = abundant; dist. = distinct; tr. = trace; ft. tr. = faint trace; the numbers daily and uninterruptedly from the one date till the other; A M. or P.M. after a number means that the

riod at which Hæmoglobin was Detected.	"Pre-albuminuric stage."	"Post-albuminuric stage."	Dropsy.	Result.	Remarks.
aminuria.					
...	None.	None.	None.	Dismissed well.	Albuminuria coincident with an attack of broncho-pneumonia.
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	Albuminuria coincident with a glandular abscess in neck.
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	A very severe case of scarlatina, with long continued throat condition and double otorrhœa.
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Death.	A case of scarlatina anginosa with double otorrhœa and, during last few days, signs of double pneumonia. No *post-mortem* examination. *Note increase of albumen on 19th day.*
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	A fairly severe case, developing double otorrhœa.
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Death.	A severe case, with ulceration of tonsils, double otorrhœa, and capillary bronchitis. No *post-mortem* examination. *Note increase of albumen on 16th.*

fer to the day of illness; a dash — between two dates means that the abnormal constituent was present
bnormal constituent was detected only in the morning or evening specimen of that day as the case might be.

No. of Case.	Date of Admission.	Age.	Sex.	Day of Illness.		Period at which Albumen was Detected.
				Adm.	Dism.	
18	10/1/96	4	M.	3rd	60th	3rd (P.M.), 4th (A.M.) tr.; 7th (P.M.), 8th (A.M.), 9th (A.M.) tr.; 12th tr.; 14th (A.M.), 15th (P.M.) tr.; 16th—23rd tr.; 24th (A.M.) tr.; 30th (P.M.) tr.; 54th (P.M.), 55th (A.M.), 56th (P.M.), 57th, 58th (A.M.), 59th (P.M.) ft. tr.
19	28/1/96	15	F.	6th	59th	31st (P.M.) tr.
20	31/1/96	13	F.	3rd	67th	4th—8th tr.; 32nd (P.M.) tr.
21	15/2/96	21	F.	2nd	58th	3rd—5th tr.; 6th (P.M.) tr.
22	14/11/95	12	M.	4th	62nd	21st (A.M.) tr.; 26th ft. tr.; 28th (A.M.) ft. tr.
23	23/11/95	8½	M.	3rd	59th	30th dist.; 34th (P.M.), 35th (A.M.) dist.; 35th (P.M.) tr.; 37th (A.M.) tr.; 48th (P.M.) tr.
24	27/11/95	18	M.	4th	60th	45th (A.M.) tr.; 61st (A.M.) tr.
25	29/11/95	8	M.	8th	66th	27th (P.M.)—32nd (A.M.) tr.
26	4/12/95	6	M.	2nd	99th	22nd (A.M.) dist.; 27th tr.; 29th (P.M.) tr.
27	31/12/95	26	M.	6th	63rd	6th (P.M.) tr.; 7th (A.M.) ft. tr.; 55th (P.M.) tr.
28	14/1/96	7	M.	2nd	59th	7th (P.M.)—9th (A.M.) tr.; 10th—12th (A.M.) tr.; 46th (P.M.) tr.; 47th (A.M.) tr.; 51st (A.M.), 52nd (A.M.), 53rd (A.M.), 54th (A.M.) ft. tr.; 55th (P.M.) ft. tr.
29	20/1/96	19	M.	2nd	54th	2nd (P.M.)—4th tr.; 32nd (P.M.) tr.; 33rd (P.M.) tr.; 35th (P.M.), 36th (P.M.), 37th (P.M.), 38th (P.M.) tr.; 40th (P.M.) ft. tr.; 46th (P.M.), 53rd (P.M.) ft. tr.
30	21/1/96	24	M.	4th	61st	10th (P.M.) tr.; 11th (A.M.) tr.
31	22/1/96	30	M.	6th	55th	6th (P.M.)—9th dist.; 10th (A.M.) tr.
32	24/1/96	16	M.	2nd	59th	31st (P.M.) dist.; 32nd (P.M.) tr.; 33rd (P.M.) dist.; 35th (P.M.) tr.; 40th tr.; 41st tr.; 55th (P.M.) sl. tr.; 57th (A.M.) sl. tr.
33	3/2/96	6½	M.	4th	58th	5th—14th tr., except on 7th (P.M.) when dist.; 16th (A.M.) ft. tr.; 18th, 19th, 20th (A.M.) ft. tr.; 21st—24th ft. tr.; 25th (P.M.) ft. tr.; 26th tr.; 27th (A.M.) ft. tr., and thereafter ft. tr. sometimes in morning, at others in evening specimen, and occasionally in both till dismissal.
34	5/2/96	7	M.	8th	12th	9th (A.M.) tr.; 10th, 11th tr.; 12th (P.M.) abdt.
35	13/2/96	10	M.	3rd	58th	6th (P.M.) tr.; 7th (A.M.) tr.; 13th (A.M.) tr.
36	15/2/96	10	M.	5th	63rd	10th ft. tr.; 11th (A.M.) ft. tr.; 17th (P.M.) ft. tr.; 24th (P.M.) ft. tr.; 42nd (P.M.) ft. tr.

ABBREVIATIONS.—Abdt. = abundant; dist. = distinct; tr. = trace; ft. tr. = faint trace; the numbers daily and uninterruptedly from the one date till the other; A.M. or P.M. after a number means that the

Period at which Hæmoglobin was Detected.	"Pre-albuminuric stage."	"Post-albuminuric stage."	Dropsy.	Result.	Remarks.
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	..
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Death.	Case of old-standing pleurisy, with signs of effusion on admission. No *post-mortem* examination.
...	None.	None.	None.	Dismissed well.	...
...	None.	None.	None.	Dismissed well.	...

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efer to the day of illness; a dash — between two dates means that the abnormal constituent was present
bnormal constituent was detected only in the morning or evening specimen of that day as the case might be

No. of Case.	Date of Admission.	Age.	Sex.	Day of Illness.		Period at which Albumen was Detected.
				Adm.	Dism.	
II.—Cases						
37	20/11/95	50	F.	5th	61st	16th (A.M.) tr. ; 26th (A.M.) tr.
38	13/2/96	3	F.	2nd	57th	23rd (P.M.)—33rd (A.M.) tr. to ft. tr.
III.—Cases with both Blood and Albumen, the amou						
39	7/11/95	4	F.	4th	118th	25th tr. : 26th, 27th dist. ; 33rd tr. ; 38th (P.M.) tr. ; 39th—67th dist. to ft. tr., and thereafter an occasional trace till 89th.
40	13/11/95	11	M.	5th	162nd	45th—140th abdt. to ft. tr. ; 143rd (P.M.), 144th (A.M.) ft. tr. ; after this ft. tr. in one or both specimens till 158th, since when ft. tr. noted daily.
41	14/11/95	7	M.	4th	111th	52nd—76th (A.M.) abdt. to ft. tr. ; 84th (P.M.) ft. tr. ; 85th (P.M.) ft. tr.
42	20/11/95	12	M.	4th	133rd	48th (P.M.)—53rd (A.M.) dist. to tr. ; 54th (A.M.) tr. ; 72nd—89th, in P.M. specimens only, tr. ; 90th (P.M.) dist. ; 91st (P.M.) dist. ; 129th, 130th, 132nd, in P.M. specimen only, ft. tr.
43	20/11/95	6	M.	4th	88th	19th—31st (A.M.) dist. to tr. ; 32nd (A.M.) tr. ; 35th tr. ; 36th (P.M.) tr. ; 37th (A.M.) ft. tr. ; 38th—41st tr. ; 47th (P.M.) dist. ; 81st (A.M.) ft. tr.
44	14/1/96	6	M.	3rd	109th	17th (P.M.)—75th from abdt. to tr. ; thereafter till 109th tr. and ft. tr. in P.M. specimens always ; and ft. tr. in A.M. specimens also, except on four occasions when none detected.
45	12/11/95	3	M.	6th	59th	7th (A.M.) dist. ; 10th (A.M.) dist. ; 27th (A.M.), 30th (A.M.), 31st (A.M), 33rd (A.M.) ft. tr.
46	22/1/96	10	F.	4th	60th	9th (P.M.) tr. ; 10th tr. ; 15th (A.M.) tr. ; 16th tr. ; 17th (A.M.) ft. tr. ; 21st (A.M.), 24th (P.M.), 25th (A.M.) ft. tr. ; 26th, 27th tr. ; 28th (A.M.) ft. tr.
47	23/12/95	6	M.	7th	65th	31st tr. ; 33rd (P.M.) tr. ; 51st (A.M.) ft. tr.
48	21/1/96	6	M.	6th	63rd	31st (A.M.) sl. tr.

Abbreviations.—Abdt. = abundant ; dist. = distinct ; tr. = trace ; ft. tr. = faint trace ; the numbers daily and uninterruptedly from the one date till the other ; A.M. or P.M. after a number means that the

Period at which Hæmoglobin was Detected.	"Pre-albuminuric stage."	"Post-albuminuric stage."	Dropsy.	Result.	Remarks.
æmaturia.					
16th (A.M.), 26th (A.M.)	None.	None.	None.	Dismissed well.	...
22nd (P.M.)—33rd (P.M.), 35th ft. tr.	Marked.	Marked.	None.	Dismissed well.	...
f the latter being out of all proportion to the Blood.					
42nd (P.M.)—89th, with very occasionally no hæmoglobin reaction; thereafter occasionally present till 94th; absent from then till 112th; and occasionally a faint reaction from 112th to 116th.	None.	Marked.	None.	Dismissed well.	A severe case; double otorrhœa; mastoid disease.
45th—139th (P.M.), 143rd (P.M.), 144th (A.M.) ft. tr.; 145th, 148th (P.M.), 149th (P.M.), 151st (A.M.) occasional traces till 158th; since when traces daily.	None observed.	None.	None.	Dismissed well.	Cervical glands swollen and painful on 42nd day.
52nd—77th (A.M.); thereafter 80th ft. tr.; 82nd (P.M.) ft. tr.; 83rd (A.M.), 84th (P.M.) ft. tr.; 90th (P.M.) ft. tr.; 93rd (P.M.) ft. tr.	None observed.	Slight.	Œdema of eyelids.	Dismissed well.	...
0th (P.M.)—53rd (A.M.), 56th (P.M.)—59th (P.M.), 60th (P.M.), 62nd (P.M.), 63rd (A.M.), 64th (P.M.), 66th, 68th (P.M.), 72nd, 73rd (P.M.), 74th (A.M.), 75th, 77th, 80th, 90th, 98th in P.M. specimens only; 106th, 107th, 112th, 114th, 115th, 117th, 122nd, 124th, in P.M. specimens only, ft. tr.; 129th ft. tr.; 130th, 131st (P.M.) ft. tr.	None observed.	Slight.	None.	Dismissed well.	...
25th—31st (A.M.), 32nd (A.M.), 37th (A.M.) ft. tr.; 38th—40th, 47th (P.M.).	None.	None.	Œdema of eyelids and scrotum.	Dismissed well.	Severe case; double otorrhœa; glands on left side of neck enlarged on 34th day.
16th (P.M.)—75th; thereafter always present in P.M. specimen; on twenty occasions absent in A.M. specimen.	Present.	Absent.	Œdema of eyelids.	Dismissed well.	...
7th (A.M.), 10th (A.M.).	None.	None.	None.	Dismissed well.	...
15th (A.M.), 16th (P.M.).	None.	None.	None.	Dismissed well.	...
1st.	None.	None.	None.	Dismissed well.	...
17th (P.M.).	None.	None.	None.	Dismissed well.	...

fer to the day of illness; a dash — between two dates means that the abnormal constituent was present
bnormal constituent was detected only in the morning or evening specimen of that day as the case might be.

CURRENT TOPICS.

Post-Graduate Course in Midwifery.—Drs. Black and Jardine, the physicians in charge of the Glasgow Maternity Hospital, have decided to begin a post-graduate course in midwifery in January. Clinical lectures will be given daily, and the members of the class will be allowed to be present at all operations within the hospital. They will also be allowed to attend patients in the out-door department. Graduates intending to take the class are requested to apply as soon as possible to Dr. Jardine, 5 Clifton Place, W., from whom information as to regulations, fees, &c., may be obtained.

The Rebman Publishing Co. have ready for early publication a small book by Mr. D'Arcy Power, entitled, "Some Points in the Anatomy, Pathology, and Surgery of Intussusception," being the Hunterian Lectures for 1897, delivered at the Royal College of Surgeons. They will also issue next week Dr. Alexander Morison's new book on "Cardiac Failure and its Treatment, with especial Reference to Baths and Exercises," which has been unavoidably delayed in the press.

MEETINGS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1897-98.

Meeting I.—11th October, 1897.

The President, Dr. Donald Fraser, *in the Chair.*

I.—HYSTERIA AS A PSYCHOSIS.

By Dr. Fraser.

Dr. Fraser's paper appears as an original article at p. 401.

Dr. Alex. Robertson, in proposing a vote of thanks, said that from time to time Dr. Fraser had brought before the Society cases suffering from affections of the nervous system, mostly organic, and now he has taken up the subject of hysteria, a subject wide and interesting. The localisation of function has thrown much light on this condition, and how when one portion of the brain is affected it has a direct bearing and influence upon the other. The exact nature of hysteria is unknown. The use of hypnotism is interesting in the light of Ernest Hart's report. He believes it to be useful in severe cases. The thanks of the Society are due to Dr. Fraser for his extremely suggestive address.

II.—SPECIMENS.

A. By Dr. Workman.

Dr. Workman showed the following specimens of tissue preserved by the formalin method:—

1. *Liver, bile-stained.*—Case of jaundice. The gall-bladder contained bile; the duct was patent. A great hæmorrhage had occurred into left pleura. (*Post-mortem* 16th April, 1896. Dr. D. C. M'Vail.)
2. *Cancer of Liver.*—Private case. (Dr. J. Lindsay Steven.)
3. *Larynx, epithelioma.*—Case of epitheliomatous ulceration of the vocal cords and neighbouring parts. (24th July, 1897. Dr. Newman.)
4. *Portion of brain.*—Six months in glycerine and water with pot. acetate. (Melnikow's method.)
5. *Kidney congestion.*—In the upper part were two abscesses. (*Post-mortem* 13th June, 1896. Mr. H. E. Clark.)

B. By Dr. A. R. Ferguson.

Specimen of acute aortic endocarditis.—The seat of the lesion is immediately below and between the anterior and left posterior cusps of the aortic valve. It is composed of a mass of tissue in the form of a deep cup, whose walls are formed of irregular, warty, white, and mixed thrombi.

The left half of the anterior cusp and nearly the whole of the left posterior cusp have been destroyed. The orifices of the coronary arteries are free. The part involved, which corresponds with the "undefended spot," is thinned, and the muscle has undergone considerable softening, a probe being readily passed through the septum at this point. On the right side of the septum, in a position exactly corresponding with the lesion in the left ventricle, was a yellowish patch of fibrin, and several sub-endocardial hæmorrhages were also present in this neighbourhood. Cultures taken from the heart lesion showed staphylococcus pyogenes. The appearances on the whole present a striking resemblance to those observed in the "ulcerative" form of endocarditis.

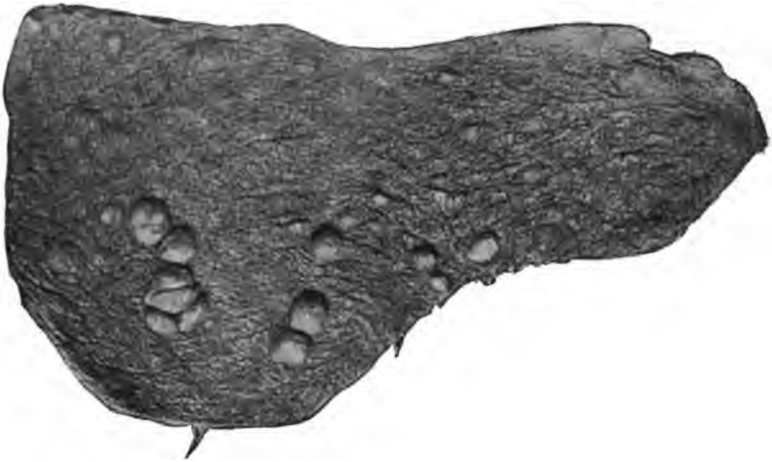
The only approach to metastatic formations was found in the right kidney, where two wedge-shaped areas, resembling small recent infarctions, were observed. Microscopic examination of these, however, failed to detect microbes.

Elizabeth B., age 22, was admitted to Professor M'Call Anderson's wards in the Western Infirmary critically ill, and died thirty hours afterwards. She had complained for six weeks previously of breathlessness, palpitations, cough, and flitting pain of vague distribution. While in hospital an aortic regurgitant murmur was detected. Her temperature before death was not elevated. Urine non-albuminous.

C. BY DR. L. R. SUTHERLAND.

1. *A case of trichinosis in which the condition was first recognised after death by the discovery of the parasite in the muscles of the tongue.*—The microscopic preparations exhibited were obtained from the muscles of the upper arm, abdomen, and tongue. The parasite is shown encapsuled, and after removal from its capsule. In only a few instances is there evidence of calcareous infiltration of the capsule. The patient was a man 42 years of age, a potter by trade, who died from advanced phthisis pulmonalis. A small superficial ulceration on the left lateral margin of the tongue, evidently resulting from a sharp carious tooth, was noted at the autopsy. A section of this, prepared by the "rapid method" (Dr. Coats, *Journal of Pathology and Bacteriology*, vol. ii, 1894, p. 492), showed on microscopic examination an encapsuled parasite in the muscle underlying the ulcer. On this discovery being made, a detailed and critical examination of the voluntary muscles was instituted. In the great majority of cases no deviation from the normal was noted in the muscles on naked eye inspection. By means of a lens, however, minute glistening or semi-opaque points—encapsuled parasites—were rendered visible at somewhat infrequent intervals. The parasites were found most abundantly in the muscles of the upper extremity, particularly in the biceps and coraco-brachialis muscles, a few being also met with in the muscles of the thenar eminences. They were frequently met with in the diaphragm, the pectoral and abdominal muscles, the psoas and iliacus; less frequently in the adductor muscles, in the soleus and gastrocnemius muscles; and still less frequently in the plantar and inter-

osseous muscles of the foot. Somewhat sparsely distributed in the muscles of the back, especially the erector spinæ, they were more readily discovered in the trapezii and muscles clothing the scapulæ. A few isolated parasites were found in the muscles of the larynx and hyoid bone, and further examination revealed their presence in small numbers in various parts of the tongue. The heart muscle was carefully examined, with negative results. The examination of scrapings from different portions of the intestinal mucous membrane was also negative. The fact of trichinosis was not suspected during life, and no clinical particulars throwing light on this aspect of the case could be obtained.



2. *Multiple sebaceous tumours of the scrotum.*—The specimen, as shown in the above illustration, consists of a large portion of the skin of the scrotum, from the surface of which a number of more or less rounded swellings project. The nodules, numbering thirty, vary in size from a millet-seed to that of horse-bean, the largest measuring 1·4 cm. in diameter and projecting to the extent of 0·6 cm. Three of the nodules occupy the raphé. There is no tendency towards any definite symmetrical grouping; the sebaceous glands in the skin around the tumours are only occasionally prominent. Many of the lesions show simply a superficial prominence, while others are pedunculated, distinctly overhanging their bases. The larger pedunculated masses have a thin, and generally

smooth, continuous covering of skin which is partly pigmented. Nothing suggestive of a duct-opening is seen on the surface. The tumours are of firm or distinctly hard consistence, and on section show a white semi-fluid or putty-like material, in which, in case of the larger tumours, cretaceous masses like pumice stone are embedded.

Microscopically examined the lesions, apparently originating in sebaceous glands, show externally a fibrous capsule, within which are several layers of greatly flattened and otherwise altered epithelial cells. In the contents are recognised distorted epithelial cells, granular and fatty *débris*, and numerous granular or crystalline masses of lime, which dissolve with effervescence on the addition of HCl. The patient was a dock-labourer, aged 52, who died as a result of a strangulated hernia (femoral). The tumours had been present for an indefinite period before death, and caused neither pain nor inconvenience. The skin of the body, including the scalp, presented a normal appearance. There was no evidence of acne or comedo, but over the right knee a sebaceous cyst the size of a large pea was found. The appearances may be contrasted with those seen in Hutchinson's and Lake's cases, illustrations of which are shown.

REFERENCES.

Hutchinson, *Illustrations of Clinical Surgery*, vol. ii, plate 68.
Lake, *Illustrated Medical News*, 1889, vol. iii, p. 217.
Kocher, "Krankh. d. Hoden" in Pithaig Billroth's *Handb. d. Chirurgie*, chap. xiv.
Taylor, *Journal of Cutaneous aud Genito-Urinary Diseases*, 1890, p. 379.
Jacobsou, *The Diseases of the Male Organs of Generation*, 1893, p. 566.

3. *Large intussusception of small intestine.*—The intussusception, which is sickle-shaped, lay in the left iliac and lumbar region, with its convexity in the iliac fossa. The length of the intussusception is 30 cm. As displayed, the outer tube is packed with dense folds of small intestine. The lower end tapers off, and an irregular piece projects at the apex, as if here a partial double involution existed. There is no evidence of the existence of a tumour at this point. At the upper extremity there is a very small double involution. The structure is displayed by section of a portion in the midst of the lesion, and it is seen that here there is a much narrowed, but simple inner tube, whose whole external diameter is only 13 mm., and whose calibre is virtually abolished. The mesentery of this portion is shown separated from it and turned up.

The outer or returning layer of intestine, on the other hand, is crushed together, showing innumerable prominent folds. This is partly shown by the portion of intestine removed and stretched out. As this was done, however, after hardening, it is impossible to expand it to its true extent. The packing of intestine in this layer is estimated as follows:—The total normal length of the small intestine being 700 cm., the intussusception began 120 cm. from the pylorus, and ended 225 cm. from the ileo-cæcal valve, giving 345 cm. of free intestine, and 355 cm. in the lesion. As the outer and inner tubes are simple, and as the length of the intussusception was 30 cm., there remain 295 cm. for the middle tube, which is packed into about 30 cm., a tenth part of its proper length. The intestine below the intussusception was much contracted, while that above was distended and contained pale fluid, having a fæcal colour and smell.

Chas. G., aged 16, was affected with urgent intestinal obstruction, which had begun ten days before death. There was pain with severe exacerbations. A hard mass was found in the left iliac fossa and hypochondrium, and it was felt to become hardest during the paroxysms of pain, which seem to have occurred about once in five minutes. The boy improved for a time, but on the seventh day of the attack fæcal vomiting began, and he gradually got worse. There was a history for the past two years of recurrent attacks of intestinal obstruction. These attacks were very urgent, lasted some days, and were sometimes associated with the passage of blood from the rectum.

4. *Pyo-pneumothorax with wall of considerable intra-pulmonary tubercular cavity presenting.*—The specimen consists of the greater part of the left lung. The pleura is much thickened, and was coated with thick pus. The pleural cavity contained gas. There is seen at the upper part of the pleural surface the exposed internal wall of a phthisical cavity with partitions and recesses, the superficial or pleural aspect of the cavity being entirely awanting over an area measuring 7·5 cm. from above downwards, by 3·5 cm. from before backwards. There is a large cavity at the apex of the lung, and what remains of lung tissue is shrunken and the seat of tubercular condensations. The extent of the necrosis and sloughing of the pleura is the feature of the specimen.

Christopher H., aged 16, was under the care of Dr. Gemmell in the Western Infirmary. After a history of cough for ten months, he suddenly experienced severe pain in the left side while engaged in breaking coals. The pain was followed by shortness of breath. On admission, there were pronounced signs of pyo-pneumothorax. The boy was transferred to Dr. Hector Cameron's care. The chest was opened and drained, with relief to his symptoms. The boy died about four months later.

REVIEWS.

A System of Medicine by Many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.D., LL.D., F.R.S. Vol. IV. London: Macmillan & Co. 1897.

WITH the publication of the fourth volume of this *System* comes the information that six, if not more, volumes, instead of the estimated five, will be required to accommodate all the articles. This is what we expected, and we rejoice that both editor and publishers have risen to the occasion and determined not to impair the value of the work by curtailment of necessary space. We had occasion in our last notice to refer to one or two articles that in our opinion were quite too concise, and we hope that in what remains of this excellent and most comprehensive *System* we will not have to make a similar criticism.

The subject matter of the present volume consists of the sections on Diseases of the Liver and Pancreas; on Diseases of the Kidneys; on Diseases of the Lymphatic and Ductless Glands; on Diseases of the Respiratory Organs; and on Diseases of the Nose, Pharynx, and Larynx.

Dr. William Hunter writes upon the Anatomy of the Liver, the Functions of the Liver and their Disorders, Congestion of the Liver, Jaundice, Toxæmic Jaundice, Weil's Disease, and Acute Yellow Atrophy, and his contribution occupies 118 out of the 260 pages devoted to hepatic disease. Dr. Hunter's article on the functions of the liver is a masterly discussion of a most obscure and difficult subject. To an accurate and extensive knowledge of the literature of the subject the author has added the results of many experiments carried out by himself. His conclusions are stated in clear and forcible language, and the article cannot fail to be of the greatest service to clinical observers struggling with the difficulties of hepatic disease. On the liver as a hæmolytic organ, Dr. Hunter has, as the result of experiment, much important information to give. He finds himself "unable to regard the liver as the most important organ concerned in hæmolysis." He considers that the "chief function of the liver in relation to hæmolysis is to arrest and get rid of the products of hæmolysis conveyed to it in the portal blood from the spleen and intestines" (p. 24). These are certainly important statements, and may ultimately have a far-reaching influence on theory and practice. One remark only of a critical kind we would make. In a difficult and closely reasoned article of this kind the reader might have been helped by a judicious use of spacing and italics, particularly when conclusions and summaries were being stated. Sometimes we find the conclusions under leaded type, sometimes under italics, and without spacing from the context. Some attention to this would have greatly aided the reader.

The article on Congestion of the Liver strikes us as being hardly so satisfactory. We are not quite sure that the term "active" as applied to hepatic hyperæmia not mechanical or "cardiac" in origin is a happy use of the word either from the pathological or clinical point of view; and the somewhat meagre discussion of symptoms, diagnosis, and prognosis seems to indicate that the talented author is still without that amount of clinical experience which is so necessary for the thorough exposition of a subject so obscure. In his article on Jaundice, and its Pathology, Dr. Hunter is again at his best. Here he is on familiar ground, and his statements may well be taken as expressing the very latest teaching on the subject. We are quite inclined to agree with him when he summarises his opinion as follows:—"Instead, then, of the two varieties of jaundice formerly described, one *hepatogenous* or *obstructive*, the other *hæmatogenous* or *non-obstructive*, it is necessary now to recognise one class only. All jaundice is *hepatogenous*, the result of absorption of bile formed and excreted by the liver. The cause of the absorption may be obvious—mechanical obstruction (*simple hepatogenous jaundice*) or more obscure and less easily demonstrable swelling and catarrh of the lining epithelium of the bile passages, with consequent increased viscidity of the bile (*hæmo-hepatogenous jaundice*)" (p. 81). The arguments and experimental details with which he leads up to this conclusion are very convincing.

Dr. Hale White's contribution on Perihepatitis is clear and convincing, based on a thorough acquaintance with the pathological processes concerned. We specially commend to our readers his remarks on the difference between ascites due to cirrhosis and that due to chronic peritonitis and perihepatitis. If his contention that "in cirrhosis the patient rarely lives long enough after the first tapping for a second to be necessary," whilst in chronic peritonitis with perihepatitis several may be necessary, be true, then he has succeeded in establishing a most important clinical fact, one that we confess we were hardly prepared for (p. 122). The facts which he advances in support of his position if not very numerous are, so far as they go, convincing.

The articles on Suppurative Hepatitis and on Amœbic Abscess of the Liver have been written by Dr. A. Davidson and Dr. Henri A. Lafleur respectively. Here again we have the same difficulty of classification to deal with to which we referred in noticing the contributions by the same authors on Dysentery and Amœbic Dysentery in Vol. II of the *System*. Are we at present in a position to discuss the diagnosis of amœbic and non-amœbic liver abscess as separate and indedependent clinical conditions, especially in dealing with hepatic suppuration associated with dysentery? Both articles are excellently written, full of details which are bound to be of the greatest service to physicians practising in the tropics. In the discussion of the pyæmic forms of abscess we find, so far as we can see, no reference to large abscess of the liver resulting from suppurative disease of the uterine appendages, of which we have met examples in the *post-mortem* room more than once.

Cirrhosis of the Liver is described by Dr. Herbert P. Hawkins under three headings—1. Alcoholic Cirrhosis; (*a*) Multilobular; (*b*) Unilobular. 2. Malarial Cirrhosis. 3. Syphilitic Cirrhosis. In this article also it is shown that old teaching requires modification in the light of new anatomical and histological knowledge. It is most important for the physician to realise that in the multilobular form ascites is common and jaundice rare, whereas in the unilobular or biliary form jaundice occurs very frequently and dropsy rarely. The author discards the use of the terms atrophic and hypertrophic as applied to the multilobular and unilobular forms, and we think with good reason. Cornil's theory as to the origin of the new bile-ducts in cirrhosis is that adopted as most satisfactory by Dr. Hawkins. Altogether, this article forms a very valuable contribution to scientific medicine.

Dr. Hale White on the Tumours of the Liver is again full and exhaustive. His article throughout shows a comprehensive knowledge of the pathological details, and the power to apply these to the elucidation of clinical manifestations.

The description of the Diseases of the Gall-bladder has been well accomplished by Mr. Mayo Robson, who makes out a very good case for early operative interference in all cases of gall-stones. We quite agree with him in the opinion he expresses as to the frequency with which adhesive peritonitis is associated with attacks of biliary colic. A somewhat lengthened experience in the *post-mortem* room has convinced us of the truth of this view.

The articles on Congenital Obliteration of the Bile-ducts and on Icterus Neonatorum have been entrusted to Dr. John Thomson, of Edinburgh, whose previous work on this subject is well known to all pediatric physicians.

Dr. Reginald H. Fitz, of Harvard, writes upon the Diseases of the Pancreas, a class of affections most obscure and difficult to deal with, and for our knowledge of which we owe very much to the work of this distinguished American physician. He has made clear to us more particularly the essential nature of inflammatory lesions of the pancreas, and of their association with hæmorrhage, gangrene, and the peculiar lesion to which the name fat-necrosis has been applied. The article could not have been placed in better hands.

Dr. Rose Bradford's article on the General Pathology of the Renal Functions is exhaustive and readable. Perhaps the most original and important portion is that in which he describes his attempts to find out whether the kidneys exercise metabolic functions by excising portions of them. He was anxious to discover whether the kidneys exercised a function of internal secretion similar to that of the thyroid gland, suprarenal capsules, &c. His experiments lead him to believe that they do possess such a function, "and that the increased urea and nitrogenous extractives present in the blood and tissues," after removal of quantities of renal tissue, "are dependent on this increased production, and are in no way caused by any deficiency in the excretory activity of the kidney" (p. 317). This is certainly a startling statement, and one calculated, if finally proven, to exercise important modifications of our views as to the nature of uræmia, and we find that the author, in the course of a very able discussion of the pathology of uræmia, does not hesitate to apply the results of his experiments in his attempt to solve the problem of its causation. We confess, however, that we still find somewhat greater comfort from a belief in the older views.

A most careful article on Movable Kidney has been written by Dr. Alexander Macalister, and it is quite unnecessary, with a writer on Bright's disease so well known as Dr. Dickinson, to say that his article on Diseases of the Kidney Characterised by Albuminuria is in all respects excellent.

Mr. Henry Morris' article on the other diseases of the kidney strikes us as being, on the whole, less satisfactory than many of the others. In some respects we find that it is hardly up to date, and we are quite sure that in the diagnosis of obscure cases of pyonephrosis, for example, the physician or surgeon will not get much help from the remarks of the author.

The articles on Myxœdema, Graves' Disease, Addison's Disease, Hodgkin's Disease, &c., are in every sense full and satisfactory, fully up to date, and rendered the more valuable to the reader by the copious bibliographical lists with which most of them are furnished. Drs. Ord, Hector Mackenzie, Rolleston, and George R. Murray are to be complimented upon the thorough manner in which they have executed their tasks. The Editor and Mr. Pridgin Teale discuss the subject of Scrofula, and the article recalls the former well-known work of the distinguished authors.

Drs. Ransome and Hector Mackenzie write upon the General Pathology of Respiratory Diseases, and on the Physical Signs of Diseases of the Heart and Lungs. The section on Diseases of the Nose and Throat is the work of Sir Felix Simon, Dr. de Haviland Hall, Dr. Greville MacDonald, and Dr. W. Williams. In this way the detail of the specialties is being worked into the general system of medicine.

We again most cordially recommend the work to our readers.

The Practitioner's Handbook of Treatment, or the Principles of Therapeutics. By the late J. MILNER FOTHERGILL, M.D., M.R.C.P. Fourth Edition. Edited, and in great part rewritten by WILLIAM MURRELL, M.D., F.R.C.P. London: Macmillan & Co., Limited. 1897.

A GOOD many years have now elapsed since the last—the third—edition of this well-known work came into our hands. The first three editions appeared in the lifetime of the author, who died of diabetes in 1888, and they seem to have met with a ready sale, not only in Britain but also in the States. The original plan of the work is still retained; there is the same number of chapters with the same titles as before, and the chapters are subdivided into the same number of sections, with very nearly the same headings as formerly. Dr. Murrell claims to have rewritten the book in great part, but at the same time to have preserved not only Dr. Fothergill's original design, but "above all his characteristic style"—rather a delicate combination of duties, we fear, yet, on the whole, successfully accomplished.

The plan kept in view by Dr. Fothergill in the preparation of this work was to explain the *rationale* of the therapeutic measures in common use. "First, the physiology of each subject is given, then the pathology is reviewed, so far as they bear upon the treatment; next the action of remedies is examined; after which their practical application in concrete prescriptions is furnished."

Dr. Fothergill was connected with an hospital to which no medical school was attached. In teaching hospitals, as he remarked, the energies are of necessity largely bent towards instructing students in the elements of diagnosis; where no students are present, much more attention may be given to the study of cases from the therapeutic point of view. And so he considered the great success of the *Practitioner's Handbook* a demonstration that non-teaching hospitals may be made useful beyond their own immediate precincts.

The plan of the work is undoubtedly to be commended. Its execution also does credit to its originator, and we are glad that the editor has endeavoured to retain the attractive literary style of the author. Of all the valuable features presented by the book, the numerous prescriptions scattered throughout the text will perhaps be found by the young practitioner to be not the least important.

The Retrospect of Medicine. Edited by JAMES BRAITHWAITE, M.D. Lond., assisted by E. F. TREVELYAN, M.D. Lond., B.Sc., M.R.C.P. Vol. 115. January to June, 1897. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited. 1897.

BRAITHWAITE'S half-yearly *Retrospect* appears to meet a distinct want on the part of the profession, for how else can its vitality be explained? It has been established for more than half a century, and is published in America as well as in Britain. The present issue contains one hundred and seventeen articles in the text, and there is in addition an extensive synopsis consisting of abstracts of the most practical articles in the volume with other short articles on treatment selected from the medical journals. There are tables of contents both for the text and for the synopsis, and there is an index at the end of the volume.

The Sanitary Inspector's Handbook By ALBERT TAYLOR. Second Edition. London: H. K. Lewis. 1897.

WHEN we consider that the author set about the writing of this handbook with the object of supplying sanitary inspectors and those about to study for this position with a *vade mecum*, and with the view of providing a condensed account of those subjects required for certificates of sanitary proficiency, we must at once admit that the task has been very successfully fulfilled. Beginning with an alphabetical synopsis of the Public Health (London) Act, 1891, with relative sections in other Acts, which is condensed to the cramming point, the author goes on to deal with the appointment, tenure of office, and duties of the sanitary inspector: but it must always be borne in mind that these are only relative to English law. This chapter is very lucid, and enables the student to form a clear conception of the duties of the office. In speaking of the *qualifications* of the officer, he agrees that some assurance ought to be given to the public that the person entrusted with such responsible work is sufficiently qualified, he enumerates a list of the said qualifications, and proceeds to give in detail the examination which is conducted by the Sanitary Institute for certificates of competency. Keeping in mind that a similar examination is conducted in Scotland by the corresponding body, we would urge that there are defects in each examination which ought to be rectified. In the first place, each candidate ought, at least, to be able to write legibly, be a fair arithmetician, and have a capable knowledge of English composition. Neither examining body takes any step to acquaint itself with the knowledge or ability of a candidate in these respects until he has presented himself for the examination, and the examiners are confronted with the difficult duty of appraising the value of the answers to a printed paper of questions through the atmosphere of crooked spelling and distorted composition. Again, the examination is entirely a theoretical one. So far as we know, neither examining board demands any form of practical examination; consequently, a clever candidate with good memory, without any practical knowledge whatever of the subject, runs an excellent chance of passing the examination and obtaining the desired certificate, remaining, all the while, ignorant of the work of the inspector as it occurs in practice. Steps ought to be taken to remedy both defects, all the more as in certain sanitary Acts the certificates of these examining bodies are deemed worthy of acceptance for appointments.

The anomaly has thus been established of the legislature recognising as competent for these appointments men who have passed these examinations, the legislature, at the same time, making no conditions regarding, and having no supervision over, the said examinations. This oversight, however, will be partly met by the new conjoint board of examiners appointed by the Local Government Board.

The office routine of the inspector regarding nuisances and the procedure to be adopted, the returns which are demanded of him, and the forms of nuisances, receive adequate attention by the author. An excellent chapter on house-drainage follows, in which we are pleased to find that the author gives prominent place to the smoke-test for drain deficiency, unlike others who belive in oil of peppermint, brown paper, smoke-rockets, &c. Experience has amply confirmed the value of the smoke-test; and it is full time that the trifling with peppermint, &c., should be wholly abandoned. We observe, also, that the author believes (p. 160) that in the siphonage of a trap "a vacuum is created behind a column of water which *sucks* the water out of the trap." This is not a true description of what happens; it is true in respect that a partial vacuum is so produced, but the water is *driven* out of the trap by the normal pressure of the atmosphere, which is, at the moment, greater than the pressure inside the pipe, in the attempt at restoration of atmospheric equilibrium.

The author, very properly, has a good deal to say regarding infectious diseases and disinfection. He advocates the use of liquefied SO_2 in a humid atmosphere, or 1½ lb. of chloride of lime, moistened with "a few drops of strong" HCl, for every 1,000 cubic feet of air-space. To properly liberate the chlorine, more than a few drops will be necessary for this quantity. It would appear, also, that besides this fumigation, the room and its contents should be sprayed over with a 1 to 1,000 solution of corrosive sublimate. It would hardly be possible, we should think, for any stray microbe to survive such treatment. We would suggest to the author that it would be enough to deem these methods as alternatives, and that the latter is by far the better. Aerial disinfection is not necessary.

The important subject of meat inspection has received careful attention, both as to its legal and practical aspects; the former, especially, is exhaustively considered, and the pathological appearances of animals which are suffering from disease are described summarily, but precisely. The sanitation of slaughter-houses, of dwelling-houses, and of factories and workshops, with relation to the law, are intelligently considered, and the enactments of the Canal Boats Act, of the Sale of Food and Drugs Acts, and of the Margarine Act are fully dealt with. We congratulate the author upon his work, and we consider that it will be of excellent service to those for whom it is intended.

Hygiene and Public Health. By LOUIS C. PARKES. Fifth Edition. London: H. K. Lewis. 1897.

THE appearance of another edition of this popular manual within two years of the previous one demonstrates the estimation in which it is held by students and practitioners. To all intents and purposes, however, it is identical with the former edition, when the necessary emendations consequent upon the advance of knowledge are taken into consideration. As the manual was reviewed somewhat at length in the December number of the *Journal* for 1895 (vol. xliv, No. 6, p. 460, *et seq.*), we do not propose to traverse the same ground, for many of the points then discussed still form parts of the book. Suffice it to say, however, that it is a very safe guide for those who desire to possess knowledge on the varied subjects of hygiene and public health. There are but two points, in addition to those noted in the former *critique*, to which we would draw the author's attention. The first is connected with the subject of siphonage of traps (p. 140). The author says—"Where one soil-pipe receives the discharges of several water-closets on different floors, the passage of the contents of one of the upper closets down the soil-pipe may cause the water in the trap of one of the lower closets to be drawn off, *owing to the suctional force of the downward current of air caused by the descent of the liquid in the soil-pipe.*" Exception must be taken to the words which we have italicised, since they do not truly describe what takes place in the act of siphonage. It is as correct to speak of suction in this connection as to speak of a suction-pump; for suction has nothing whatever to do with the action of either. What does happen in the act of siphonage is a differential atmospheric pressure within the soil-pipe in front and behind the down-flowing column of water; that is to say, that the pressure behind the water column is less than that of the normal atmosphere; consequently, the normal atmospheric pressure, being greater than that in the soil-pipe at the moment the water column has just passed the trap, *drives* or *presses* the water out of the trap to follow the descending column in the soil-pipe, in its attempt to restore atmospheric equilibrium.

The second point is to be found in connection with the apparatus used for the estimation of CO_2 by Pettenkofer's method in the air of an occupied place. The author recommends that a glass-stoppered vessel, about 2 litres in capacity (p. 286), should either be filled with *mercury* and emptied in the place the air of which is to be examined, or should be filled with the air by means of a bellows. We fail to see the value of the former procedure, but we do perceive its great unhandiness, for when we remember that 2 litres of mercury weigh close upon 60 lb. in weight, which weight must be carried to and from the place of collection, the analysis of air becomes a ponderous business; besides, there is not the superiority in this over the bellows method to demand the carrying of this half a hundredweight of burden.

A Contribution to the Natural History of Scarlet Fever. By JOHN T. WILSON, M.D., D.P.H. (Aberd.), Medical Officer of Health, Lanarkshire. Supplement to *Public Health*, February, 1897.

THIS *brochure*, although it only runs to twenty-two pages of print, is one of the best statistical researches into the natural history of scarlet fever which it has been our privilege to peruse. An enormous amount of statistical work has been overtaken in its preparation, and the statistical records of not only the constituent parts of Great Britain, but also of some of the principal countries of the continent of Europe, and of America, have been laid under contribution. The very numerous tables which give point to the text, and the series of graphic charts which picture the results found, indicate the range of the author's research.

Dr. Wilson starts his inquiry by assuming the generally acknowledged fact that, during the last quarter of a century, there has been a gradual decline in the mortality of this disease; and he divides his research into two parts—viz., (1) To what extent has this reduction prevailed in this and other countries? and (2) what are the causes of the diminution?

He shows that, whereas in Scotland in the four quinquennial periods—1855-74—the average annual death-rates per 100,000 of population were 97, 86, 97, and 108, in the succeeding four like periods—1875-94—they had fallen to 68, 42, 23, and 20 respectively; in short, that the death-rate per 100,000 is now but one-fifth of what it formerly was, and that the reduction amounts to nearly 80 per cent. This decline has been experienced not only in Scotland, taken as a whole, but in the various districts into which the country is divided for statistical purposes; and the same is true of England, and Ireland, of certain other European countries, and of America. His figures also prove the generally accepted facts that the mortality is greatest within the first five years of life, that 60 per cent of the total deaths occur within that age limit, and that the incidence of mortality is practically identical for the sexes.

The mortality from the infective type of diseases depends upon two main factors, viz.—(1) The prevalence of the disease, or the morbidity-rate; and (2) the type of the disease, or the fatality-rate, and from both the death-rate, or mortality-rate, is the resultant.

The author, in seeking to discover the causes for the diminution of the mortality, proceeds to inquire whether this diminution arises from diminished prevalence, from lessened fatality of type, or from both, and he arrives at the conclusion that, while for Great Britain generally there has been, coincident with the general decline in mortality, a diminution of virulency of type, there has been no reduction of morbidity or number of cases, for in individual populous centres the relation between the morbidity and mortality is not the same; for example, in Aberdeen the mortality has risen slightly with a disproportionate rise in the morbidity, while in Northampton, with increase of morbidity there is accompanying decrease in mortality.

The statistics of the isolation hospitals of Glasgow, and of the Metropolitan Asylums Board of London, from 1871-75 down to 1891-94, indicate for each quinquennium a progressively downward fatality, in the former, for 1871-75, the percentage fatality being 15·3, and in the latter, for the same period, 12·2, while in both, for 1891-94, the percentage is the same, 6·3, while the numbers admitted for the disease has been progressively upwards during the same period of time, 1871-94. This, undoubtedly, indicates a lessened virulency of type even in hospital practice, and the fignres quoted also point to a like condition in home-treated cases.

His general conclusions from the morbidity-rates over Great Britain, procured by notification, are formulated as follows, viz.—(1) That a marked fall may take place in the mortality from the disease in question without diminution of number of cases; (2) that the disease still is a prevalent one, and that it attacks annually, on the average, about 50 persons per average

10,000 of the population of England and Scotland; and (3) that, notwithstanding notification, there is no marked decline in the prevalence of the disease, although alongside of this there is diminished mortality.

His enquiry into the fatality-rates also go to show a progressive diminution in the virulency of type of disease.

In considering the effect of preventive measures upon the disease, Dr. Wilson concludes that the prophylactic value of hospital isolation is by many over-rated, and that the disease, both as to its etiology and dissemination, is little influenced by general sanitary measures, except inasmuch that the general improvement of insanity environment tends to improve the vital resistance of those attacked, and to expedite recovery. Whether scarlet fever is influenced largely by climatic conditions or not is still a question for the careful and continuous observation of the future, and the author contents himself by pointing to this; but it would appear, speaking broadly, as if it were principally a disease of the temperate zone, influenced in some measure, as Ballard and others have shown, by yearly and daily ranges of temperature, while the statistics of some American States relating to the mortality of the white and coloured races respectively, indicate, by a much lower mortality rate in the latter, as if it were also governed in some degree by racial distinctions.

A careful perusal of this *brochure* will amply repay the reader, and we cannot but congratulate the author on the successful completion of a very arduous task.

The Distribution of Tuberculous Diseases in Glasgow, with Observations on the Relation of Phthisis to Room Density. By A. K. CHALMERS, M.D., D.P.H. Glasgow: Robert Anderson. 1897.

THIS pamphlet is too statistical to be adequately summarised here, but some of its conclusions may be quoted. In the twelve years, 1883-94, the deaths from all classes of tuberculous disease in Glasgow fell nearly 19 per cent, phthisis by itself, and all other tuberculous diseases together, each exhibiting practically the same reduction—viz., 19 per cent.

The "room density" (or number of "persons per room" in the average house) of the whole city fell from 2·040 in 1881 to 2·033 in 1891, while the phthisis death-rate fell from 268 to 230 per 100,000 living. All districts except one which have a phthisis death-rate above the mean have also a room density above the mean.

Of eleven districts which have a phthisis death-rate below the mean, five have a room density above the mean, so that the relation between room density and phthisis is not a simple one, and excessive density is not at once responded to by an increased phthisis death-rate. It is probable that room density, like density per acre, must attain a certain degree of intensity before its effect becomes appreciable.

Everything that can contribute to our knowledge of the etiology of phthisis will be welcomed by the medical profession, for very many factors go to make up this etiology, and it is only after the elimination of one after another of these has greatly reduced the proportion of persons who are destined to fall victims to this scourge, that the enforcement of such stringent measures as notification and segregation will become at once just and practicable.

County of Lanark: Sixth Annual Sanitary Report. By JOHN T. WILSON, M.D., D.P.H. (Aberd.), County Medical Officer. Glasgow: Robert Anderson. 1897.

THIS is the record of the sanitary administration of the county of Lanark for the year 1896, embracing an area of 542,340 acres, covered by a population of 228,942 persons. Considerable progress is being made in the establishment of good sanitary conditions in those parts wherein they were formerly awanting. The death-rate per 1,000 has fallen to 15, the birth-rate being 37·4. While in some of the mining districts infantile mortality is comparatively high, all over the county generally there were 106 infant deaths to every 1,000 births. It is pleasing to observe that the County Council is evidently at the commencement of a forward movement toward the prevention of river pollution in the county, and that contributory polluters by sewage have been asked to state within a limited time what means they propose to adopt to render harmless the sewage which presently pollutes the streams within the county. Pollution by coal-washing appears to prevail somewhat largely, and forty-six collieries have been reported upon as contributing seriously to the fouling of streams by this mode of pollution. The extent of pollution from individual pits can be gauged by the suspended matter found in the effluents, and the amounts vary, in different pits, from 29,985, 1,171, 562, 378, 200 grains, down to 1 grain of suspended solids per gallon. The need for purification measures is at once obvious. During the year seven collieries were reported to the Secretary for Scotland for powers to prosecute. The county is fairly well provided with isolation hospitals. Of the zymotic diseases, scarlet fever was the most prevalent during the year, from which, of 100 persons attacked, only 3 died; and, generally speaking, the notifiable infective diseases were less prevalent than usual.

Report of the Dublin Sanitary Association. Dublin: John Falconer. 1897.

THIS Association offers to its members the same privileges which other sanitary associations, in other centres of the kingdom, have combined to offer—viz., yearly inspection of the sanitary fittings of their houses, and, at the same time, serves a useful public purpose in (1) creating an educated public opinion on sanitary matters generally; (2) in drawing the attention of the authorities of the city of Dublin to the inadequacy, insufficiency, or want of exercise of the powers necessary to maintain the sanitary condition of the city; and (3) to watch the course of sanitary legislation. To this extent, therefore, it is in advance of ordinary sanitary protection associations elsewhere; the record of work done by this Association indicates activity in all these directions. Incorporated with the report is the address of the president (Dr. Moore), in which he deals with the defective sanitation of some of the seaside resorts near Dublin, the Public Health (Ireland) Act, 1896, epidemics in Dublin and isolation hospitals, and tuberculosis, its prevention and cure, among other topics. A very complete table, giving the deaths from tuberculous diseases in England and Wales, Scotland, and Ireland, and in Dublin and Belfast, for the period of 1881-1894, serves to illustrate many points in the address.

Manual of Gynæcology. By D. BERRY HART, M.D., F.R.C.P.E. and F.R.C.S.E., and A. H. FREELAND BARBOUR, M.A., M.D., F.R.C.P.E. and F.R.C.S.E. Fifth Edition. Edinburgh and London: W. & A. K. Johnston. 1897.

A NEW edition of so well known a text-book hardly requires many words of notice. A valuable book from the first, it has become only more valuable with each new edition, as the subject matter has become more practical. The present edition is larger than the last, and it is in the parts dealing with operative treatment that the increase has mainly taken place. Operations are given with more detail than formerly, and no pains have been spared to bring the book up to date in this or any other department. A new chapter has been given to deciduoma malignum.

The Menopause and its Disorders (*with Chapters on Menstruation*). By A. D. LEITH NAPIER, M.D., F.R.C.S. Ed., M.R.C.P. Lond., F.R.S. Ed., &c. London: The Scientific Press, Ltd. 1897.

THIS is the first important work dealing with the menopause which has been published in this country for years. In most text-books the whole subject is dismissed with one short and most unsatisfactory chapter, so that one now takes up this book with a distinct feeling of interest. Not only the phenomena of the menopause are treated of at considerable length, but the various ailments and diseases of women as they are affected by the menopause receive due attention. Thus we have chapters on uterine fibroids and ovarian cysts, on prolapsus uteri, on cystocele, &c. Perhaps, however, the most interesting parts of the book are the chapters dealing with the theory of menstruation. The author gives an historical account of the various theories which have been held from time to time, and finishes up with a very full account of the nerve theory in its various developments, including the latest which he himself supports. Briefly, his theory is that "menstruation is the result of peripheral irritation from (utricular) gland increase" acting through the sympathetic on nerve centres in the cord and cerebellum. There is in consequence increased growth of the stroma and vessels of the uterine mucous membrane for some days before the period, then there is congestion of the vessels with breaking down.

The Menopause. By ANDREW F. CURRIER, A.B., M.D. New York: D. Appleton & Company. 1897.

THE ideas expressed in this little book have been formulated by the author after sixteen years' practice, and contain his convictions on the subject of the menopause. There are two serious errors which, according to him, are very prevalent.

The first is "that the menopause is an experience fraught with peril and difficulty," "a serious, yea, even a most dangerous time and experience." The second is "that there is in some way the most intimate relationship between cancer, especially of the womb and the breast, and the menopause." These are the errors our author starts to combat, and it is but fair to him to say that he never loses sight of his object. If the reader has not realised the folly of these traditions by the time he has got to the end of the volume, it is not for want of frequent repetition. It does not seem that this book has added much to the sum of human knowledge on the menopause.

Notes on Medical Nursing. By the late JAMES ANDERSON, M.D., F.R.C.P. Edited by ETHEL F. LAMPORT. Third Edition. London: H. K. Lewis. 1897.

THESE lectures are most excellently adapted to the purpose for which they are intended—viz., as first lectures to probationers in medical wards. They are simple and clear, and give the elementary facts of physiology which every nurse wants to know, and needs to know, in an interesting way. The practical part of the lectures, too, is clear, and the principles of treatment in certain cases—*e.g.*, cardiac cases and diseases of the alimentary tract—are sufficiently explained as occasion arises. The lectures should be interesting to all nurses who are just starting a hospital course.

The Midwife's Pocket-Book. By HONNOR MORTEN. London: The Scientific Press, Limited. 1897.

THIS volume, of about one hundred pages, forms No. 3 of "The Burdett Series of Popular Nursing Text-Books." The introduction is taken up chiefly with some excellent remarks regarding antiseptics in midwifery and "rules of conduct" for midwives. Then follows some useful information on the different hospitals and training schools, advice to those going in for the London Obstetrical Society's examination, and examples of some of the recent examination questions set by that Board. The last half of the book is devoted to the "Positions," "Anatomy of the Parts," "Rules for Conducting a Case," "Practical Alphabetical Guide." We commend the volume to all midwives as being a useful text-book of reference.

Our Baby: For Nurses and Mothers. By MRS. LANGTON HEWER. Fifth Edition. Bristol: John Wright & Co. 1897.

THIS is a thoroughly practical and useful little volume. The chapters regarding the feeding and clothing of infants are excellent, and will certainly be most helpful to young mothers. The remarks on the diseases of infancy, and the medicines useful in their treatment, will also be of service to them. Altogether, the volume is admirably suited for those it is written for.

The Student's Handbook of Diseases of the Skin. By "UTILE QUOD FACIAS." Edinburgh: E. & S. Livingstone. 1897.

THIS little book is not without merit, and will probably accomplish the one object the author professes to have had in view—viz., to assist students in the diagnosis and treatment of skin diseases. The illustrations do not greatly enhance the value of the work. There are one or two misprints, and we notice that the author speaks of papules in connection with purpura rheumatica. At the same time it must be said that the blemishes are few, and scarcely such as to detract from the usefulness of the book to the undergraduate.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

PHYSIOLOGY.

BY WILLIAM SNODGRASS, M.A., M.B., C.M.

Production of CO_2 and Consumption of O in the Lungs.—In continuation of their research, the results of which were published in the *Archiv de Physiol. Norm. et Patholog.*, July, 1897, MM. Ch. Bohr and V. Henriques adduce in the October number further evidence proving that the lung is not only the seat of the excretion of CO_2 already formed in the blood, and of an absorption of O in a dissociable condition, but that this organ, at the same time and in variable measure, may be the seat of an inverse phenomenon—namely, of a process in virtue of which oxygen is consumed and CO_2 formed. It can no longer be held that the exchange of gas between the blood and the air of the lung takes place by simple diffusion. It must be admitted that the pulmonary epithelium plays an active part during respiration. It is also demonstrated that the lungs (probably by a species of internal secretion) are able to modify the amount of O held by the blood, and consecutively the distribution of O between the blood corpuscles and the plasma. We see that the pulmonary cells can elaborate substances which the blood brings from the tissues, separating CO_2 and fixing oxygen.

Innervation of the Great Intestine.—MM. Courtade and Guyon (*Archiv de Physiol. Norm. et Patholog.*, October, 1897) find that stimulation of the branches of the great sympathetic nerve to the cæcum, colon, and rectum gives rise, in the areas supplied by these branches, to relaxation of the longitudinal and contraction of the circular fibres. The inferior mesenteric ganglion is the local reflex centre for the sympathetic, by the inferior mesenteric and hypogastric nerves. The contraction of the longitudinal fibres of the rectum is regulated by the sacral erector nerves. Excitation of this nerve may also lead to secondary contraction of the circular fibres, but probably through intervention of the sympathetic.

Changes in the Form and Position of the Human Stomach during Digestion.—MM. Bianchi and Comte (*Archiv de Physiol. Norm. et Patholog.*, October, 1897), by a method of phonendoscopic projection, are able quickly and easily to arrive at a tolerably exact determination of the form, dimensions, and relationships of the stomach; to obtain important indications as to the quantities of food and of gas contained at any given time in the stomach; to follow the stomach in its movements, whether these be spontaneous or artificially excited; and to trace graphic curves of the movements of the stomach as a whole or of its parts.

The Colouring Matters of the Bile.—MM. Dastre and Floresco (*Archiv de Physiol. Norm. et Patholog.*, October, 1897) find in bile fresh from the gall-bladder a yellow pigment (biliprasinate) which, without oxidation and by the simple action of acids, may pass to a green pigment (biliprasine). Bilirubin must be oxidised to form biliverdin. The presence of biliprasine explains the green colour of ox-bile, which contains very little biliverdin.

The Influence of Muscular Exercise, Sweating, and Massage on Metabolism.—An interesting contribution on this subject by Dunlop, Nöel Paton, Stockman, and Maccadam is to be found in the *Journal of Physiology*, September, 1897. They find that (1) excessive muscular work causes an increased katabolism of proteid, as shown by increased excretion of N and S in the urine; (2) that the proteid consumed is muscle proteid; but (3) that, if the subject who performs excessive muscular work be in poor training, this consumption of muscle proteid is accompanied by the consumption of the proteid of other tissues which contain nucleo-proteids, as shown by the increased excretions of uric acid, extractive nitrogen, and phosphorus. No marked influence on metabolism was observed as due to sweating or massage. Their conclusions, as they point out, show the importance of two points long known to athletes and others doing excessive muscular work. The one is the importance of proper training, for by it an abstraction of proteid matter from tissues other than muscle can be avoided. The other is the importance of there being a sufficiency of *proteid* in the diet to compensate for the loss which occurs.

Arterial Air-Embolism.—Heller, Mager, and v. Schrötter (*Zeitschr. f. Klin. Med.*, xxxii, Suppl. p. 113) have, by injection of air into the large arteries of dogs, shown that it is possible in living animals to fill the whole circulatory system with air, air-bubbles being forced through the capillary system of the systemic circulation. If air is injected into the veins the right ventricle is unable to force the air through the pulmonary capillaries, the right ventricle being much more quickly affected than the left. Air introduced into the vascular system can be quickly eliminated in respiration.

Action of the X Rays on the Retina.—Bardet (*Compt. Rend.*, cxxiv, 24, p. 1388) has experienced a weak but plain sensation of light through the action of Röntgen rays, the direct vision of which was shut out. It is suggested that this is not due to a direct effect on the retina so much as to fluorescence generated in the media of the eye.

The Determination of Sex in Hydratina Senta.—Nussbaum, in *Arch. f. Mikros. An.*, xlix, 2, p. 227), shows that the nourishment of hydratina during a certain period of its development determines the sex of the eggs produced by the virgin females. If, from the time of creeping out till the maturation of the first egg, it is well nourished, only female eggs are laid; if badly nourished, only male eggs. Before and after this period the character of the nutrition has no determining effect on sex.

MEDICINE.

BY WALTER K. HUNTER, M.D., B.Sc.

Exophthalmic Goitre.—The pathology and treatment of exophthalmic goitre have occupied, during the past few months, a prominent place in foreign medical literature. The following is an abstract of some of the views presented:—

Dr. Eulenburg.—During the past sixty years three theories have been advanced to explain Graves's disease—(1) Hæmic theory, that the disease is due to an alteration in some of the constituent elements of the blood; (2) neurogenic, to a lesion in the medulla, or in vagus or sympathetic nerves; (3) thyrogenic, to over-action of the thyroid gland. It is the third which at present is in vogue, and according to this theory there is not only an increase of the thyroid gland and of its secretion, but also a qualitative change in this secretion.

Dr. Regnier.—In the countries where goitre is endemic one sees cases both of goitre and of exophthalmic goitre. It is not, then, an anatomical and functional alteration of the thyroid which is the sole cause of the exophthalmos. If enquiry is made into the family history of these two groups of cases, there will always be found in the exophthalmic cases certain nervous traits. It would therefore seem that the alterations in the gland take their origin in an alteration in the nervous system, and it is to this system that treatment should be directed.—(*La France Méd.*, 8th October, 1897.)

Dr. L. Haskovec maintains that exophthalmic goitre is an intoxication. He has shown experimentally that an extract of thyroid gland produces, on intravenous injection, a diminution in blood pressure and an acceleration of the pulse. The same result follows paralysis of the vagus, or stimulation of the accelerator nerves or the intracardiac ganglia. He proves that it is the centre of the accelerator nerve that is influenced by the thyroid fluid; for on excising the first dorsal ganglia (in which are found the greatest number of accelerator fibres), and injecting thyroid gland, no acceleration of the pulse results.—(Reported in *Le Progrès Méd.*, 11th September, 1897.)

M. De Cyon.—The function of the thyroid gland consists largely in transforming iodine (from the blood) into the organic substance iodothyrine. Iodothyrine (or thyroïodine) seems to be the active chemical agent in the thyroid secretion, its action being to stimulate the nerve centres which regulate the contractions of the heart. This formation of iodothyrine benefits the organism in withdrawing iodine from the circulation, for iodine has a paralysing action on some of the cardiac centres. The functions of the thyroid gland are largely dominated by the heart, through fibres which pass from that organ to the laryngeal nerves. The thyroid may then be of use to the organism, not only in giving an increased supply of iodothyrine, but at the same time, by means of the dilatation of its vessels, in relieving congestion in the brain and elsewhere.—(Reported in *La France Méd.*, 24th September, 1897.)

M. Ch. Abadie.—The hypertrophy of the thyroid gland in Graves's disease is not a primary condition, but secondary to a localised vaso-dilatation. If this dilatation of the vessels continues, a hypertrophy of the thyroid gland results. Exophthalmic goitre, then, is due to over-action of the cervical sympathetic nerves, and the proper treatment is to resect these nerves.—(*La France Méd.*, 22nd October, 1897.)

Prof. Jonnesco.—There are three methods by which exophthalmic goitre may be treated surgically—(1) Thyroidectomy, partial or complete; (2) ligature of thyroid arteries; (3) section or resection of the cervical sympathetic on one or both sides of the body. Partial thyroidectomy has been successful in about 45 per cent of the cases so treated. But in a fairly large proportion of cases the operation has been followed by sudden death. Complete thyroidectomy is a serious operation, and it is little performed. It leads to myxœdema. Ligature of the thyroid arteries is seldom practised. The treatment by section or resection of the cervical sympathetic has been followed by good results. The author has divided the cervical sympathetic in three cases, all with excellent results. There have been twelve cases of partial resection, and twelve recoveries; and in some four or five cases total resection (removing three ganglia) has been performed, on both sides of the neck, with equal success. The cases operated on were all typically Graves's disease. Resection of the cervical sympathetic is an easy operation, attended with little danger, and it seems to give, in almost all the cases, a cure, which, so far as has been noted, would seem to be permanent.

M. Abadie.—Partial removal of the thyroid is often followed by sudden death, and this does not seem to result from the operation itself, but rather from a sudden paralysis of some of the vital functions. In some other cases of partial removal the part left behind rapidly hypertrophies, and there is therefore a persistence of the initial symptoms. In any case, exophthalmic goitre is little benefited by partial excision of the thyroid gland, and myxœdema follows its complete removal. On the contrary, up to the present, all operations on the cervical sympathetic have given good results, and even the simple section of the nerve has been seen to be sufficient.—(*Le Progrès Méd.*, 23rd October, 1897.)

M. Reclus showed to the Académie de Médecine (on 22nd June) a patient who had suffered in an extreme degree from exophthalmic goitre, and where great benefit was obtained by resection of 6 cm. of the cervical sympathetic on each side of the neck. Immediately following the operation no changes were to be noted in the symptoms, but the next day the pulse was much more regular, and patient could close the eyelids—the first time for ten years. At the end of a week exophthalmos had almost disappeared, the pulse had fallen from 130 to 90, and perspirations, diarrhœa, polyuria, and tremors were no longer present. The general health was immensely improved, the heart beat much less violently, and the thyroid itself was considerably diminished in size.

At a subsequent meeting M. Poncet recorded several other good results of resection of the cervical sympathetic. He thinks this a much better and safer method of treatment than that of excision of the thyroid gland.—(*Bull. de l'Acad. de Méd.*, 22nd and 27th June, 1897.)

In *Le Dauphine Médical* (March, 1897) Drs. Deschamps and Perriol describe a case of exophthalmic goitre with dislocation of the eyeball. The patient, a woman, aged 41, presented all the symptoms and signs of Graves's disease. The left eye was completely dislocated. The eyelids not only did not cover the cornea, but at each contraction of the orbicularis the lids closed behind the eyeball, round its pedicle. The cornea was necrosed in about a third of its extent. There was also a perforation with partial collapse of the iris. The right eye, except for a considerable degree of exophthalmos, was all right. Patient had been treated by electricity, by administration of thyroid gland, by suture of the eyelids, all without any apparent benefit. The left lobe of the thyroid was next incised, quite successfully as regards the operation. Two days later, however, the patient died suddenly with signs of bulbar paralysis.

Multiple Synovitis following Pneumonia.—A case of this kind was reported by MM. Vidal and Menier to the Société Médicale des Hôpitaux. The patient, a man, aged 46, suffering from pneumonia, complained of pain in the right ankle-joint. The pain was followed by swelling and redness, and the next day the knees, first the left and then the right, became likewise affected. The left shoulder-joint, the sheaths of the extensor tendons, and the metacarpal articulations all became involved. Coincidently with the inflammation in the joints the general symptoms got much worse, and the patient died in a state of coma. The *post-mortem* examination of the joints showed only superficial changes. The synovial membranes were congested with foci of hæmorrhages; there was also some infiltration of leucocytes and desquamation of endothelial cells. The pus from the joints contained a pure culture of the pneumococcus.—(Reported in *La France Médicale*, 18th June, 1897.)

Etiology of Cirrhosis of the Liver.—In a communication to the Académie de Médecine, Lancereaux contends that the cirrhosis of the liver commonly called alcoholic depends for its production less on the ingestion of alcohol than of certain substances in the alcohol. He has seldom found the signs of alcoholic intoxication in those with cirrhosis of the liver, and it has been shown experimentally that alcohol does not cause an increase of the interstitial tissue of the liver, but rather a fatty degeneration in the liver cells. He finds cirrhosis most common in wine-drinking districts—*e.g.*, Paris, Anjou, Vendée, &c. Of 210 cases of cirrhosis of the liver, 68 indulged exclusively in wine, 126 in wine and liqueurs, 12 in wine and beer, and 4 in wine and cider. The harmful substance in wine is potassium sulphate, and this drug by itself has been shown to produce in animals cirrhosis of the liver. Beer also contains potassium sulphate, and it is to beer rather than to spirits that cirrhosis in England and Germany must be due.—(*Bull. de l'Acad. de Méd.*, 7th September, 1897.)

At subsequent meetings of the Académie, the above opinions were subjected to a considerable amount of adverse criticism.

Books, Pamphlets, &c., Received.

The Living Substance, as Such and as Organism, by Gwendolen Foulke Andrews (Mrs. Etham Allen Andrews). Boston: Ginn & Co. 1897.

The Practice of Massage: its Physiological Effects and Therapeutic Uses, by A. Symons Eccles, M.B. Second Edition. London: Baillière, Tindall & Cox. 1898. (7s. 6d. net.)

Transactions of the Chicago Pathological Society, from December 1895 to April 1897. Vol. II. Chicago: American Medical Association Press. 1897.

The Principles of Bacteriology: a Practical Manual for Students and Physicians, by A. C. Abbott, M.D. Fourth Edition. London: H. K. Lewis. 1897. (12s. 6d. net.)

Medical Diagnosis: a Manual of Clinical Methods, by J. J. Graham Brown, M.D. Fourth Edition. Edinburgh: Wm. F. Clay. 1897. (9s.)

Mastoid Abscesses and their Treatment, by A. Broca, M.D., and T. Lubet-Barbon, M.D. Translated by Henry J. Curtis, B.S., M.D. With Eleven Coloured Illustrations. London: H. K. Lewis. 1897. (6s.)

Catechism Series. Surgery: Part V. Edinburgh: E. & S. Livingstone. (1s. net.)

Sickroom Cookery and Hospital Diet, with Special Recipes for Convalescent and Diabetic Patients, by Maude Earle; with Notes on the Feeding of Infants, by Frank G. Madden, F.R.C.S. London: Spottiswoode & Co. 1897. (3s. 6d.)

A System of Medicine by Many Writers. Edited by Thomas Clifford Allbutt, M.D., LL.D., F.R.C.P., F.R.S., Regius Professor of Physic in the University of Cambridge. Vol. IV. London: Macmillan & Co. 1897. (25s. net.).

A Pictorial Atlas of Skin Diseases and Syphilitic Affections, from Models in the Saint Louis Hospital, Paris. Edited and Annotated by J. J. Pringle, M.B., F.R.C.P. London: The Rebman Publishing Co., Limited. 1897. (10s. 6d.)

The Diagnosis of the Nature of Organic Brain Disease, by Sir William R. Gowers, M.D., F.R.C.P., F.R.S. Vol. I. (Phonographic Medical Library). London: Sir J. Pitman & Sons, Limited. 1897. (1s. 6d.)

Das Verhältnis der Experimentellen Bakteriologie zur Chirurgie, von Paul Leopold Friedrich. Leipzig: Verlag von Wilhelm Engelmann. 1897.

Various Papers submitted to the International Medical Congress at Moscow, by Professor Thomas Jonnesco, of Bucharest.

Diseases of Women, by J. Bland Sutton, F.R.C.S., and Arthur E. Giles, M.D. London: The Rebman Publishing Co., Limited. 1897. (18s.)

Elementary Physiology for Nurses, by C. F. Marshall, M.D. London: The Scientific Press, Limited. 1897. (2s.)

The Midwives' Pocket Book, by Honnor Morten. London: The Scientific Press, Limited. 1897. (1s.)

Outlines of the Diseases of Women, by John Phillips, M.A., M.D. (Cantab.) Second Edition. London: Charles Griffin & Co., Limited. 1897. (7s. 6d.)

Nettleship's Diseases of the Eye: a Manual for Students. Revised and Edited by W. T. Holmes Spicer, M.B. London: J. & A. Churchill. 1897. (8s. 6d.)

Mediterranean, Malta, or Undulant Fever, by M. Louis Hughes, Surgeon-Captain, Army Medical Staff. London: Macmillan & Co., Limited. 1897. (7s. 6d. net.)

Burdett's Official Nursing Directory, 1898, by Sir Henry Burdett, K.C.B. London: The Scientific Press, Limited.

Medical School Calendar, 1897-98. Edinburgh: E. & S. Livingstone. (2s.; post free, 2s. 3d.)

GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 20TH NOVEMBER, 1897.

	WEEK ENDING			
	Oct. 30.	Nov. 6.	Nov. 13.	Nov. 20.
Mean temperature, . .	46·3°	45·6°	50·9°	45·5°
Mean range of temperature between day and night, .	16·3°	9·6°	10·9°	11·7°
Number of days on which rain fell, ...	1	1	4	5
Amount of rainfall, . ins.	0·03	0·01	1·34	0·44
Deaths registered, . . .	273	277	294	254
Death-rates, ...	19·9	20·1	21·4	18·4
Zymotic death-rates, . .	2·9	2·5	2·4	2·3
Pulmonary death-rates, .	6·2	6·6	7·4	6·1
DEATHS—				
Under 1 year, . . .	79	58	88	71
60 years and upwards, .	58	49	49	36
DEATHS FROM—				
Small-pox, ...	...	...	1	...
Measles, ...	8	6	1	7
Scarlet fever, . . .	5	5	6	2
Diphtheria, ...	...	4	2	2
Whooping-cough, . .	13	12	8	9
Fever, ...	2	3	2	8
Diarrhœa, ...	12	5	13	3
Croup and laryngitis, .	5	3	3	3
Bronchitis, pneumonia, and pleurisy, . . .	60	71	82	65
CASES REPORTED—				
Small-pox, ...	2	1	...	1
Diphtheria and membranous croup, ...	9	12	16	10
Erysipelas, ...	21	22	27	26
Scarlet fever, . . .	102	86	95	85
Typhus fever, . . .	1	3	1	...
Enteric fever, . . .	17	10	8	15
Continued fever, . .	...	...	...	...
Puerperal fever, . .	2	1	1	...
Measles,* . . .	89	166	145	187

* Measles is not notifiable.

SANITARY DEPARTMENT,
GLASGOW, *30th November, 1897.*

INDEX.

Abdominal disease, diagnosis of. G. S. Middleton, 321.
  cases of. G. S. Middleton, 321.
Abstracts from Current Medical Literature—
  Diseases of children. J. Lindsay Steven, 312.
  Diseases of the ear. J. W. Downie, 157, 397.
  Diseases of the eye. F. Fergus, 237.
  Gynæcology and obstetrics. E. H. L. Oliphant, 316.
  Medicine. W. K. Hunter, 155, 466; W. R. Jack, 309.
  Nervous diseases and insanity. R. S. Stewart, 75, 308.
  Physiology. W. Snodgrass, 154, 393, 464.
  Surgery. J. G. Andrew, 233, 394; T. W. Jenkins, 76.
Accident, rare cases of. D. Macartney, 161.
Albuminuria, scarlatinal. F. Dittmar, 426.
Allan, J. W.—On the functions of a medical society, 418.
Arthritis, acute rheumatic, treated surgically. J. O'Conor, 269.

Black, M.—A year's work at the Glasgow Maternity Hospital, with notes of cases, 362.
Books, &c., received, 79, 159, 239, 318, 399, 468.
British Pharmacopœia, nature and purpose of. C. O. Hawthorne, 1.

Charteris, Prof. M., obituary notice, 51.
Correspondence—
  Administration of chloroform, 307.
Current Topics—
  The Public Health (Scotland) Bill, 53.
  British Medical Association—Glasgow and West of Scotland Branch, 54.
  Medical appointments, 54.
  Proposed memorial to the brothers William and John Hunter, 106.
  Glasgow Eastern Medical Society, 106.
  Dr. Thos. F. Tannahill, 200.
  British Pharmaceutical Conference, 200.
  Army Medical Service, 201.
  Bovril stamnoids, 201.
  Twelfth International Medical Congress, Moscow, 1897, 279.
  Glasgow Royal Infirmary: demonstrations to practitioners, 282.

Current Topics (*continued*)—
  Western Infirmary, 282.
  City of Glasgow Small-pox Hospital, Belvidere, 282.
  Presentation of a seal to the Glasgow Eastern Medical Society, 380.
  Post-graduate course in midwifery, 442.
  Publishing notes, 442.
Cystic disease of kidney. D. Newman, 42.

Diagnosis of abdominal disease. G. S. Middleton, 321.
Dittmar, F.—Scarlatinal albuminuria, 426.

Eastern Medical Society, 380.
Ectopic pregnancy, cases of. J. Edgar, 187, 253.
Edgar, J.—Series of cases of ectopic pregnancy, with remarks on diagnosis and treatment, 187, 253.
Eye, syphilitic diseases of. A. M. Ramsay, 11.

Fæcal tumour, sequel to case of. G. S. Middleton, 81.
Findlay, W.—Presidential address to the Glasgow Eastern Medical Society, 349.
Fraser, D.—Hysteria as a psychosis, 401.

Gardner, Dr. Wm.—Obituary notice, 52.

Hawthorne, C. O.—The nature and purpose of the British Pharmacopœia, 1.
History of pathology. C. Workman, 339.
Hypertrophic pulmonary osteoarthropathy, case of. J. Lindsay Steven, 241.
Hysteria as a psychosis. D. Fraser, 401.

Insanity, clinical essays on. J. T. Maclachlan, 196.
  certification and treatment of. J. T. Maclachlan, 196.
Intestinal preparations. L. R. Sutherland, 85.
Intussusception of intestine. L. R. Sutherland, 446.

Kelly, J. K.—Remarks preceeding a demonstration in the Glasgow Royal Infirmary, 14th May, 1897, 31.
Kidney, cystic disease of. D. Newman, 42.

Lectures on clinical medicine. J. Lindsay Steven, 241.

Macartney, D.—Two comparatively rare cases of accident, 161.
Mackay, W. A.—Unusual case of zona, 278.
Maclachan, J. T.—Clinical essays on insanity, 196.
  certification and treatment of lunacy, 196.
Maternity Hospital, a year's work at. M. Black, 362.
Medical society, functions of. J. W. Allan, 418.
Medico-Chirurgical Society: Transactions of—
    Edington, G. H.—Excision of ankle performed three years ago, 55.
      excision of tarsus, eleven months after operation, 56.
    Renton, J. C., and Snodgrass, W.—Abdominal section for ruptured gastric ulcer, 59.
    Renton, J. C., and Adamson, R. O.—Abdominal section for ruptured gastric ulcer, 60.
    Nicoll, Jas. H.—Notes on surgical cases, 60.
    Teacher, J. H.—Notes on the parasite of malaria, 108.
    Middleton, G. S.—Two cases of beri-beri, 114.
    Hunter, W. K.—Bacteriology of beri-beri, 116.
    Ness, R. B.—Case of myxœdema complicated with cardiac disease, 117.
    Barr, T.—Case of cerebellar abscess, 202.
    Edington, G. H.—Excision of scapula for sarcoma, 202.
    Barr, T., and Nicoll, J. H.—Malignant tumour of the brain, 204.
    Downie, J. W.—Septic thrombosis of lateral sinus following influenza; operation; recovery, 209.
    Dalziel, T. K.—Excision of long buccal nerve for facial neuralgia, 209.
      excision of simple stricture of rectum by Kraske's method, 210.
      case of gangrene of lung treated by excision of the gangrenous tissue, 211.
    Clark, H. E.—Case of cerebral tumour; operation; death, 213.
Meteorological and vital statistics of Glasgow, 80, 160, 240, 320, 400, 470.
Middleton, G. S.—Sequel to a case of large fæcal tumour, 81.
  Some observations on the difficulties of diagnosis in abdominal disease, with brief accounts of illustrative cases, 321.
Motto, our. W. Findlay, 349.

Ness, R. B.—Case of myxœdema complicated with cardiac disease, with an account of the *post-mortem* examination, 94.
Newman, D.—Cases of cystic disease of the kidney, with special reference to their pathology, diagnosis, and surgical treatment, 42, 163.

Obituary—
    Prof. M. Charteris, 51.
    Dr. Wm. Gardner, 52.
Obstetrical and Gynæcological Society: Transactions of—
    Gibson, E. A.—Specimen, 135.
Obstetrical and Gynæcological Society: Transactions of (*continued*)—
    Jenkins, T. W.—Gynæcological cases from the Victoria Infirmary, 136.
    Edgar, J.—Three cases of broad ligament cysts, 140.
      case of dermoid cyst of both ovaries; the larger strangulated owing to torsion of its pedicle, the smaller simulating a sactosalpinx in shape, 144.
    Russell, A. W.—Vesical calculus after Cæsarian section, 146.
      case of puerperal toxæmia in which antistreptococcic serum was used, 148.
    Jenkins, T. W.—Hydrosalpinx, 217.
      oöphoro-salpingitis bilateralis, hydrosalpinx, perisalpingitis, 218.
    Black, M.—Case of rupture of uterus, 218.
    Jardine, R.—Specimens, 220.
      retraction ring as a cause of obstruction in labour in breech cases, 222.
      nature's method of delivery in transverse presentations, 224.
    Kerr, J. M. M.—Notes of a fatal case of septicæmia in an infant six days old, 226.
    Gibson, E. A.—Case of pyæmia treated by antistreptococcic serum, 380.
    Campbell, J. M.—Case of septic infection after childbirth successfully treated by antistreptococcic serum, 382.
    Edgar, J.—Cases of ectopic pregnancy, with remarks on diagnosis and treatment, 383.
    Oliphant, E. H. L.—Specimen, 383.
    Cameron, M.—New form of cephalotribe, 384.
    Black, M.—A year's work at the Glasgow Maternity Hospital, with notes of cases, 384.
O'Conor, J.—Surgical treatment of acute rheumatic arthritis, 269.
Osteo-arthropathy, hypertrophic pulmonary. J. Lindsay Steven, 241.

Pathological and Clinical Society: Transactions of—
    Gairdner, W. T.—Case of mitral stenosis, in which at a late date the murmur underwent a complete alteration, from a thrombus attached to one of the cusps of the valve, 118.
      specimens illustrating aneurysms of the arch of the aorta which either opened into or pressed upon the vena cava superior or the pulmonary artery, 120.
    Cameron, H. C.—Aneurysm of the third part of the subclavian successfully treated by ligature of the first part of the axillary, 128.
    Reid, W. L.—Hæmatosalpinx connected with an extra-uterine fœtation, 130.
    Buchanan, R. M., and Black, Malcolm.—Fresh specimens, 134.
    Fraser, D.—Hysteria as a psychosis, 442.
    Workman, C.—Specimens, 443.
    Ferguson, A. R.—Specimens, 443.
    Sutherland, L. R.—Case of trichinosis, 444.
      multiple sebaceous tumours of scrotum, 445.
      large intussusception of small intestine, 446.
      pyopneumothorax with tubercular intrapulmonary cavity, 447.

- Pathology, history of. C. Workman, 389.
- Pharmacopœia, British, nature and purpose of. C. O. Hawthorne, 1.
- Post-graduate course in midwifery, 442.
- Pregnancy, ectopic, cases of. J. Edgar, 187, 253.
- Pyopneumothorax. L. R. Sutherland, 447.

- Ramsay, A. M.—On some diseases of the eye, the result of syphilis, 11.
- Reviews—
  - Allbutt, T. C.—A system of medicine by many writers, vols. ii and iii, 283; vol. iv, 443.
  - Anderson, J., and Lamport, E. F.—Notes on medical nursing, 463.
  - Ball, J. B.—Handbook of diseases of the nose and pharynx, 300.
  - Binz, C., and Latham, P. W.—Lectures on pharmacology for practitioners and students, 288.
  - Braithwaite, J., and Trevelyan, E. F.—The retrospect of medicine, vol. cxv, 453.
  - Brunton, T. L.—Lectures on the action of medicines, 286.
  - Cautley, E.—Natural and artificial methods of feeding infants and young children, 298.
  - Chalmers, A. K.—The distribution of tuberculous diseases in Glasgow, with observations on the relation of phthisis to room density, 459.
  - Clark, A. C.—Clinical manual of mental diseases, for practitioners and students, 385.
  - Clarkson, Arthur.—A text-book of histology, descriptive and practical, for the use of students, 70.
  - Coutts, J. A.—Some aspects of infantile syphilis, 304.
  - Currier, A. F.—The menopause, 462.
  - Duckworth, Sir Dyce.—The sequels of disease, and prognosis, 151.
  - Elder, W.—Aphasia and the cerebral speech mechanism, 291.
  - Fenwick, S., and Fenwick, W. S.—Student's guide to medical diagnosis, 303.
  - Fenwick, W. S.—Disorders of digestion in infancy and childhood, 298.
  - Fernie, W. T.—Herbal simples approved for modern uses of cure, 152.
  - Finlayson, J.—An account of the life and works of Dr. Robert Watt, author of the Bibliotheca Britannica, 301.
  - Fothergill, J. M., and Murrell, W.—The practitioner's handbook of treatment, or the principles of therapeutics, 452.
  - Gibson, G. A.—Edinburgh Medical Journal, new series, vol. i, 393.
  - Gray, Wm.—Influenza, with special reference to some peculiar symptoms, 153.
  - Halleck, Reuben P.—The education of the central nervous system, 68.
  - Hart, D. B., and Barbour, A. H. F.—Manual of gynæcology, 461.
  - Hedley, W. S.—Practical muscle testing and the treatment of muscular atrophies, 387.
  - Helmholtz, H. von.—Handbuch der physiologischen Optik, 72.
  - Hewer, L.—Our baby: for nurses and mothers, 464.

- Reviews (*continued*)—
  - Hughes, Amy.—Practical hints on district nursing, 74.
  - Hutchison, R., and Rainy, H.—Clinical methods: a guide to the practical study of medicine, 303.
  - James, A.—Royal Infirmary cliniques, 305.
  - Johnson, W.—The Swedish system of physical education, 293.
  - King's College Hospital reports, 306.
  - Lassar-Cohn.—Praxis der Harnanalyse, 302.
  - Littlejohn, H.—Report on the causes and prevention of smoke from manufacturing chimneys, 69.
  - Macnaughton-Jones, H.—Practical manual of diseases of women, and uterine therapeutics, 154.
  - Marshall, C. F.—Elementary physiology for nurses, 300.
  - Morten, H.—The midwife's pocket-book, 463.
  - Muir, R., and Ritchie, J.—Manual of bacteriology, 290.
  - Napier, A. D. L.—The menopause and its disorders (with chapters on menstruation), 462.
  - Paget, Stephen.—The surgery of the chest, 66.
  - Parkes, L. C.—Hygiene and public health, 456.
  - Poore, G. V.—Nervous affections of the hand and other clinical studies, 387.
    - the dwelling-house, 388.
  - Practitioner, new series, vol. v, 306.
  - Pringle, J. J.—A pictorial atlas of skin diseases and syphilitic affections, from the museum of the Saint Louis Hospital, Paris, part vii, 74.
    - parts x and xi, 305.
  - Report of the Dublin Sanitary Association, 461.
  - Reynolds, Sir J. R.—Essays and addresses, 227.
  - Richardson, Sir B. W.—Vita medica: chapters of medical life and work, 229.
  - Ross, F. W. F.—Septic conditions of the infantile alimentary canal and their treatment, 298.
  - Schlichter, H. G.—Problems of nature: researches and discoveries of Gustav Jæger, M.D., selected from his published writings, 294.
  - Sprigge, S. S.—Life and times of Thomas Wakley, founder and first editor of the Lancet, 296.
  - Sutherland, J. F.—The insane poor in private dwellings and licensed houses, 292.
  - Sutton, J. Bland.—Ligaments: their nature and morphology, 73.
  - Swanzy, H. R.—Handbook of the diseases of the eye and their treatment, 304.
  - Taylor, A.—The sanitary inspector's handbook, 454.
  - Thomson, C. J. S.—Mystery and romance of alchemy and pharmacy, 302.
  - Transactions of the Obstetrical Society of London, vol. xxxviii, part iv, 232.
  - Turner, D.—Manual of practical medical electricity, 299.
  - "Utile Quod Facias."—The student's handbook of diseases of the skin, 464.
  - Waller, Augustus D.—Exercises in practical physiology, 71.

Reviews (*continued*)—
  Walsh, D.—Excretory irritation and the action of certain internal remedies on the skin, 299.
  Waring, H. J.—Diseases of the liver, gall-bladder, and biliary system, 297.
  Wilson, J. T.—A contribution to the natural history of scarlet fever, 457.
    county of Lanark: sixth annual sanitary report, 460.
  Wishart, J.—Schedules for plant descrip-description, 231.
  Wright, J. & Co.—The medical annual or practitioner's index, 74.
Rheumatic arthritis, acute, treated surgically. J. O'Conor, 269.
Royal Infirmary, demonstrations to practitioners at, 282.
  demonstration in. J. K. Kelly, 31.

Scarlatinal albuminuria. F. Dittmar, 426.
Scrotum, sebaceous tumours of. L. R. Sutherland, 445.
Steven, J. Lindsay.—Lectures on clinical medicine, 241.
  case of the so-called hypertrophic pulmonary osteo-arthropathy of Marie, without pulmonary disease, 241.
Sutherland, L. R.—A series of intestinal preparations, 85.
Syphilis as cause of diseases of eye. A. M. Ramsay, 11.

Trichinosis, case of. L. R. Sutherland, 444.
Tumour, fæcal. G. S. Middleton, 81.

Warden, A. A.—Notes on the routine examination of the normal and the strictured urethra, with details of the treatment of "dilatable" stricture: based on the practice at Prof. Guyon's clinique, Necker Hospital, Paris, 172.
Workman, C.—The history of pathology, 339.

Zona, unusual case of. W. A. Mackay, 278.

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3
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